PENCIL POINTS

September 1935

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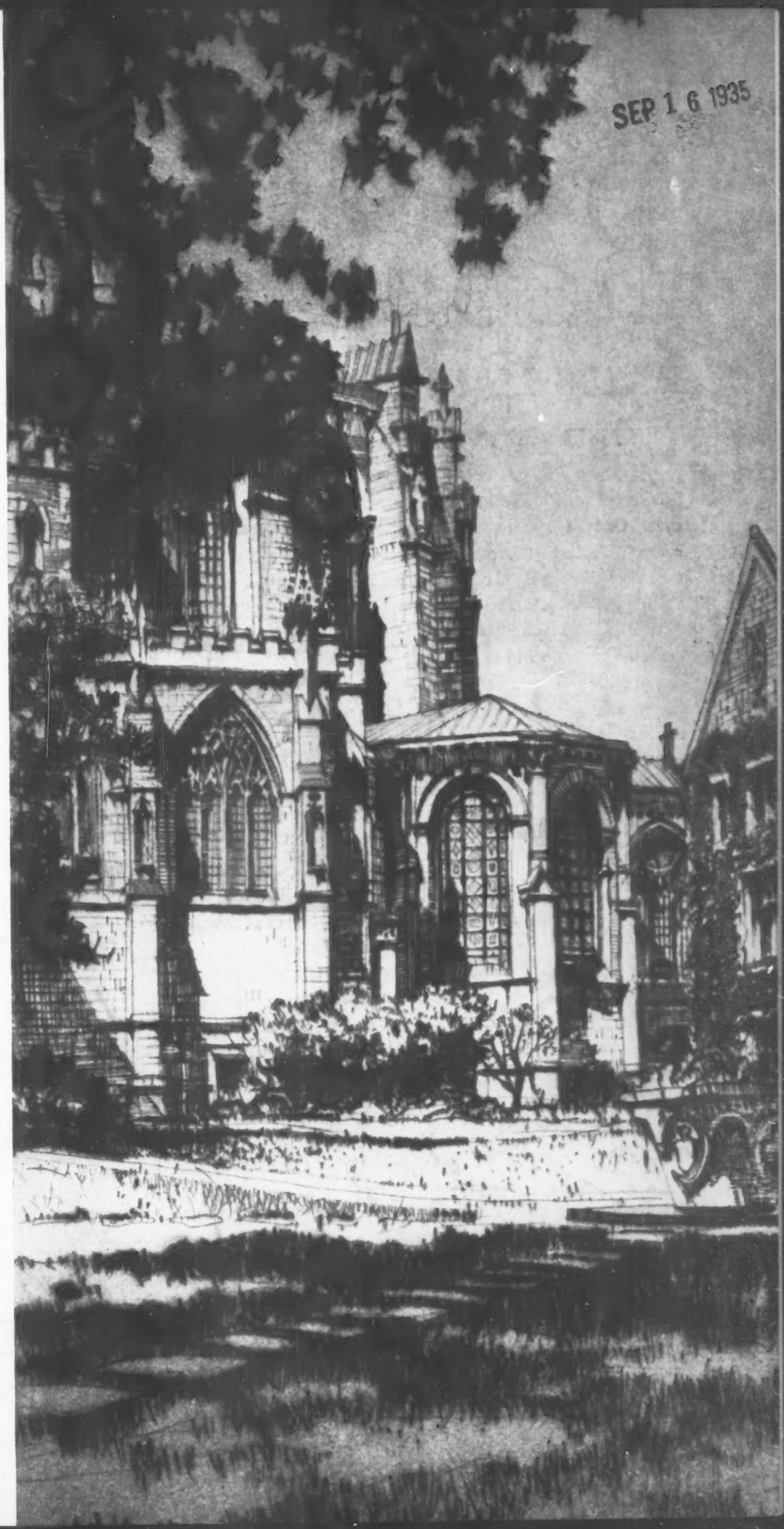

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Pencil Points, published monthly by Reinhold Publishing Corporation at 258 Atlantic St., Stamford, Conn. Publication office, Stamford, Conn. Editorial and Advertising Offices, 330 West 42nd Street, New York, N. Y. Yearly subscription $3.00, single copies 35 cents. Entered as

PENCIL POINTS

A Journal for the Drafting Room

SEPTEMBER, 1935 — VOLUME XVI, NUMBER 9

RUSSELL F. WHITEHEAD, *Editor* — KENNETH REID, *Managing Editor*

Something for Everyone in the Architectural Profession

Cover Design, "Cathedral of St. John the Divine, New York," *by Samuel Chamberlain*

READERS' COMMENT *for future reference*

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Published Monthly by REINHOLD PUBLISHING CORPORATION, *Stamford, Conn., U.S.A.*

RALPH REINHOLD, *President and Treasurer* — H. BURTON LOWE, *Vice President and Secretary*
PHILIP H. HUBBARD, *Vice President* — FRANCIS M. TURNER, *Vice President*

Executive and Editorial Offices: 330 West 42nd Street, New York

35 cents a copy. Yearly subscription $3.00, two years subscription $5.00, payable in advance, to the U. S. A., U. S. Possessions, Cuba and Mexico. Foreign subscribers add $1.00 a year for postage; Canadian, 50 cents a year additional. Remittances by International or American Express Money Order or by Draft on a bank in the U. S. should be payable in United States funds. Subscribers are requested to state profession or occupation. Changes of address must reach us before the 20th of the month to assure delivery of forthcoming issue. Be sure to give both your old and new addresses. *To Contributors:* Articles, drawings, photographs, etc., sent with a view to publication will be carefully considered, but the Publisher will not be responsible for loss or damage.

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Pencil Points is being indexed regularly in The Art Index.

THE MAGAZINE OF ARCHITECTURE AND DRAFTSMANSHIP

LEADING MINDS *agree on this*

"THE architects and builders made careful analysis of the various types of floor construction available—and after considering all of the elements—dead load and its effect on steel and foundations, speed of construction, cost and facility with which piping and electric conduits could be placed—selected reinforced cinder concrete floor arches and fireproofing as the most satisfactory and economical." Leading minds in the architectural world agree on the above quotation taken from one of the Architectural papers. And, those with greatest experience in the use of reinforcing steel agree on the superiority of American Steel & Wire Company Wire Fabric—supplied in rolls or sheets—electric weld or triangle mesh. Satisfactory installations in the world's greatest buildings confirm their good judgment in specifying this product.

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HERE, THERE, THIS & THAT

"Modernize Main Street" Competition

Seven men, representative of leading architectural, designing, and merchandising thought of today, are acting as judges for the "Modernize Main Street" architectural competition, sponsored by the Libbey-Owens-Ford Glass Company, of Toledo, and conducted by the *Architectural Record* of New York City, with Kenneth K. Stowell, A.I.A., as professional adviser.

They are Melvin Thomas Copeland, Harvard University; Andre Fouilhoux, New York City; Albert Kahn, Detroit; William Lescaze, New York City; John W. Root, Chicago; Fritz Walker, Cleveland, and Kenneth C. Welch, Grand Rapids, Mich.

A total of 726 designs were received from architects and draftsmen in every part of the country. They are being judged at Cluff Point, Lake Champlain, New York, and will be awarded twelve prizes and 40 mentions, in four divisions, amounting to $11,000, each division carrying first, second, and third place awards.

The four divisions represent buildings typical of Main Street everywhere, the food store, drug store, apparel shop, and the automotive sales and service station. Submitted plans must be designed to enable ultra modern display of goods and provide such customer convenience that shopping becomes a real pleasure.

Results will be announced in the October issue of *Architectural Record* and a selection of drawings will appear in PENCIL POINTS for October.

Information About the G.E. Home Building Plan

We are in receipt of a letter, with enclosures, from J. F. Quinlan, Manager of the General Electric Company's "New American" Demonstration Home Building Program, which should be of general interest to architects. The letter reads as follows:

"In view of our conversation today, I wish to make clear to you the policy of the General Electric Company in this "New American" Demonstration Home Building Plan with reference to furnishing architectural plans to builders.

"In the first place the General Electric Company is not building any houses. The program in which we are now is merely an effort to have built a number of demonstration houses from Coast to Coast:—

1st —to stimulate insofar as possible the building industry and to obtain showrooms for General Electric equipment.

2nd—from the winning designs in our Architectural Competition, we have picked 18 designs mostly prize winners, which we have encouraged builders and G.E. distributors from Coast to Coast to have constructed for the purpose of demonstration during the month of October, this year.

"We have been very careful in all of our negotiations to assist local architects at every stage of the game, i.e., the General Electric Company will not sell plans for these houses to builders or potential owners. We have organized about 175 Committees in all of the leading cities of the country, such personnel of these Committees being made up of G.E. Sales Managers, Distributors, and Dealers. These Committees being familiar with the building plan approach builders. When the builder asks where he can obtain the detailed plans and specifications, we have instructed our Committees to tell the builder to consult his architect and obtain them through him. If the builder says he does not have an architect on his staff, we recommend that he employ one immediately especially in view of the fact that construction of these homes must be supervised by a local architect. The architect, therefore, obtains the plans from the General Electric Company for a fee of $25.00, which is in reality a royalty to the original designer. We feel, therefore, that we are helping the architectural profession greatly by not distributing plans to builders direct and by encouraging employing architects for the supervision of constructing these homes.

"I feel that this should be made clear to the architects as there has been considerable misunderstanding of this matter. I attach a copy of a bulletin, which I have issued to all Committees from Coast to Coast, which describes this practice. We will be very glad to have forwarded a copy of this bulletin to any architect who may be interested."

The bulletin referred to by Mr. Quinlan above reads as follows:

"One of the great opportunities offered to us by our "New American" Demonstration Home Building Program is the chance it gives each dealer to solidly entrench his organization in the favorable regard of local architects. As you know, architects exert tremendous influence not only in the styling of homes, but also in the type of equipment used. Having this in mind, we propose that plans for prize-winning homes be made available to builders only through local architects.

"The procedure should be as follows: When a builder has been selected, he should go to his own architect; his architect can obtain the plans with full detailed working specifications from the local committee or directly from this office at a cost of $25 per plan, per house. The better procedure would be for the local committee to furnish the local architect with the drawings. The local architect is then engaged in a supervisory capacity. His fee, charged to the builder, should be the $25 which he pays for the plans plus an amount to be agreed upon between the builder and the architect for the architect's services as supervisor of construction.

"In the event the builder does not regularly employ an architect, the local committee can suggest several for his consideration.

"Local architects will recognize the opportunity which participation in this plan provides to enhance their local prestige, and will undoubtedly fix their fees accordingly. It will be necessary for each local committee to acquaint their local architects with this policy as soon as possible. One way to do this, would be to hold in cities, where a public showing of the prize-winning drawings is to be held, a pre-showing for architects—at that time acquainting them personally with our policy of local co-operation. In addition also, each architect should receive notification by mail. A suggested letter is attached.

"You can readily appreciate the advantage of tying-in with your local architects in this fashion, and I am sure that you will proceed accordingly."

The suggested letter to architects:

Dear Mr. ————

"As part of a program to encourage home building and to show what architects and scientists can make available to enhance the art of modern living, the General Electric Company recently conducted an Architectural Competition. More than 9000 architects sent for programs and more than 2000 drawings were received. An eminent jury awarded prizes totaling $21,000 for the 52 plans which in their opinion provided the best solutions to the specified problem.

"The second step in the program is to have these homes actually constructed for demonstration purposes in as many cities and towns throughout the country as is possible. We, the local representatives for General Electric products, are undertaking this part of the program. We hope that these houses will stimulate home building and modernization in a way that will increase business for all architects, builders, and suppliers of materials.

"The work on the demonstration houses will be done by local builders employing local capital, local labor, and insofar as possible local materials. Because of the importance of the architect in residential construction, the General Electric Company requires that a local architect must be employed in connection with the construction of each new demonstration home. The working drawings and specifications will be made available only to architects.

"Complete information can be obtained from any of the undersigned:"

Joseph D. Murphy to Teach at Washington University

Mr. Joseph D. Murphy, of Kansas City, Missouri, has been appointed Acting Associate Professor of Design in the School of Architecture, Washington University, St. Louis.

Mr. Murphy studied at the Massachusetts Institute of Technology from 1927 to 1929. During his first year there, he won the Fontainebleau Scholarship, and three years later, the M.I.T. Fellowship for European travel. The latter he was obliged to relinquish on winning also the Paris Prize. He spent the summer prior to his departure for Europe with Messrs. Bennett, Parsons & Frost, on the early plans for the Chicago World's Fair.

During his year of study in Paris, he was four times Medallist in the Con-

cours of the Ecole des Beaux-Arts. He then collaborated with Prof. Jacques Carlu, Director of the School at Fontainebleau in a competition for the rehabilitation of the Avenue de la Grande Armee, Paris, spending a total of two years in the office of this inspiring and talented architect.

In 1932, he returned to Kansas City where he has been employed in the design of the Civic Auditorium of that city, the House of Detention, the interior designs of the Court House, and, in association with Keene & Simpson, he has prepared drawings for the proposed Science Building of Rockhurst College.

He has recently been appointed architectural advisor on a Committee of eighteen representative business men who are sponsoring a large project for the rehabilitation of the downtown section of Kansas City, which it is hoped will soon be realized under Federal auspices.

An Innovation at M.I.T.

The stimulating realities of planning and supervising the construction of a modern house will be introduced in the first year course of the school of architecture of the Massachusetts Institute of Technology beginning this autumn. The new course, which is believed to be unique, brings to architecture the laboratory method which has proved so successful in science and engineering.

Under the new plan of instruction, first year students will gain a clear conception of the profession they are entering and have early contact with the many interesting problems which usually are encountered only after an architect begins his professional career. The course is also expected to prove especially valuable when students later begin their studies in design.

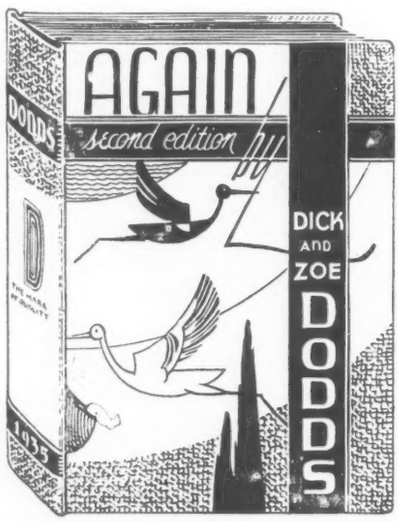
This advance in education was decided upon only after long study and consultation with leading architects and members of the advisory committee of the school of architecture. The plan has been approved by the Institute's corporation, and will become effective at the opening of the academic year in October.

The work will include the selection and purchase of a suitable lot, making plans and specifications for a moderate size house, selecting a building contractor, and supervision of every step of construction. The plan will be carried out with the constant assistance and supervision of the faculty, and when completed the house will be sold and the proceeds used to purchase a new location and finance the building of another house for the next year's class.

During the first few weeks of the opening term the class will become familiar with various phases of architectural office practice, and later will make a study of the proposed location, taking into consideration such economic and social factors as transportation, real estate values, taxes, mortgages, deeds, building laws, surveying, and methods of financing. An important feature of the course will be a series of lectures by outstanding authorities in many fields relating to domestic architecture. The work will be further supplemented by individual research and visits to various types of residences.

At the beginning of the second term, the students will prepare preliminary scale sketches for a house to be erected on the chosen lot. This sketch problem exercise will be developed into a final problem, and the best design chosen as a basis for the house to be built.

From that point on the course will parallel still further the office practice of an architect. Working drawings and specifications will be prepared for the final estimate, bids obtained, and the contract let. The house will be started, and the actual construction followed by the class in every detail. Studies of interior color schemes and landscape treatment of the grounds will complete the project. The house and lot will then be turned over to the Institute authorities for sale.



Birth Announcement sent by R. P. Dodds

Samuel E. Hillger

1862—1935

Mr. Samuel E. Hillger, Registered Architect, of Auburn, N. Y., died after a brief illness on July 18th at the age of 73. He was born in Brownsville, Texas, and spent his boyhood in New Orleans where his father practiced architecture.

About 1880 he went to Ithaca, N. Y., where he entered the architectural course at Cornell University with the class of 1884. After completing his studies there he entered the office of W. H. Miller, architect, in Ithaca and served as his first assistant for many years. During that period Mr. Hillger was very directly responsible for the building of the Cornell Library and Law School as well as many of the fraternity houses.

In 1898 he moved to Auburn, N. Y., and opened his own office. He practiced his profession there alone until 1928 when the partnership of Hillger and Beardsley was formed. During these 37 years he has been the architect on all the school buildings built in Auburn. On the large grammar school built in 1908 he was associated with H. Van Buren Magonigle. He also planned Mercy Hospital and the Auburn City Hospital, the Court House, Knights of Columbus Building, Elks Building and the Masonic Temple as well as many homes, stores and commercial buildings. The later buildings were under the partnership.

His registration certificate carries the low number of 151 and is dated December 1, 1916. He was a member of the Central New York Chapter of the American Institute of Architects for a great many years and has served as its treasurer. He was a close friend of many of the well known architects in Central New York of the older generation, many of whom died before him. Since he was very active until his death he will be missed by the entire profession who knew him so intimately.

And Still They Come

The editors had no idea that by printing the birth notice by Jack E. Pulver in the July issue and the follow-up by Farrington Wade Brown in August they would set other proud young fathers to sending in their own announcements. However, we did not reckon with the pride of parenthood. The unusual card shown herewith is submitted by its author, Richard P. Dodds of Youngstown, Ohio, to prove that originality (as well as fecundity) is not solely resident along the eastern seaboard. Incidentally, it was a boy, Edward Parke Dodds.

A Letter from Robert Sargent Cook

"Surely art and science together have mutually contributed to the greatest works of art, Mr. A. W. Jackson notwithstanding. Certainly in the creation of architectural works does the wedding of æsthetic and scientific thought produce felicity in result. To deny conscious use of geometry in design by the fallacious argument that a triangle fits a pyramid but not a cathedral façade is to argue analogously that mathematics is a hindrance to music because all tonal ideas cannot be expressed in the same key.

"It is quite evident that such a provocative, one-sided and ill-tempered article, as Mr. Jackson's is, was printed to ascertain by volume and sincerity of reply the interest of the profession in this subject. Although I speak for myself only, I feel certain that Mr. Jackson's main point could be successfully refuted by anyone with more than a superficial understanding of the creative process.

"Most foolish of all his implied propositions is that the less one knows of science, provable facts, or truth, so much the smaller obstacle stands in one's way to become or be a forceful artist. Of course there is no definite demarcation between one's knowledge and his feelings, nevertheless it is futile to deny that those who have designed or built beautifully and significantly have both known more facts (about emotional appeal, composition, perspective, construction, mathematics, and the other sciences), and have felt more deeply the ideas they were intending to express through the language of spatial art.

"In some gifted persons wide knowledge, great range of feeling, and facile means of expression are united without conscious effort of the talented one to 'round himself out.' In most of us but one or two of these qualifications is present in some degree. The truest artist-

(Continued on page 16)

THESE ARE THE QUALITIES OF

TERRAZZO FLOORS

For the convenience of architects in specifying flooring materials, here is a check-list of specific properties of terrazzo:

1. DURABILITY. Terrazzo is a form of concrete—made with an aggregate of marble chips and portland cement, separated by dividing strips. It is literally as hard as marble and as permanent as concrete. When ground and polished to its final finish, the surface area of terrazzo is approximately 85% marble and 15% portland cement matrix. This provides a surface that is highly durable.

2. APPEARANCE. Characteristic of terrazzo are its clear, warm colors, its rich natural sheen and its pleasing variations in design. Wide variety in color and combinations of color in domestic and imported marble chips, plus the choice of pigment for coloring the matrix, provide a color range in terrazzo which is practically unlimited. In terrazzo pattern, likewise, limitation depends only upon the requirements of decorative harmony and upon the architect's expression in design. Each terrazzo floor may be individually planned for a particular installation. Any motif, in intricate pictorial detail or simple repetitive pattern, may be executed in terrazzo. And because of its durability, the excellent appearance of a well-designed, properly placed and maintained terrazzo floor is constant throughout its life.

3. ORIGINAL COST. Installation costs of terrazzo floors vary somewhat in relation to detail of design, type of metal strip, color and sizing of marble chips, color requirements, and portland cement used (white or gray). In general, however, original cost of terrazzo is directly comparable to cost of other types of high-grade floorings. Consideration of the unique results achieved in terrazzo, together with its exceptional durability, definitely establishes it as one of the most economical flooring materials.

4. MAINTENANCE. Little maintenance is needed for terrazzo. Routine washing and mopping, plus polishing at occasional intervals, keeps a terrazzo floor in excellent condition. The hard and dense finish of terrazzo is highly stain-resistant. It is practically mar-proof, even under severe wear. It is easy to clean. These factors are reflected in low maintenance cost.

This information is presented by The National Terrazzo and Mosaic Association, Inc.—an organization of qualified terrazzo contractors formed for the purpose of establishing and maintaining quality standards in terrazzo installation. Detailed information and established specifications for terrazzo may be obtained from the Secretary of the Association, 524 Brook Street, Louisville, Kentucky.

THE NATIONAL TERRAZZO AND MOSAIC ASSOCIATION

101

A FOLLOWING ADVERTISEMENT WILL PRESENT A CHECK-LIST OF RECOMMENDED TERRAZZO USES

architect must have at least equal command of the scientific and æsthetic problems surrounding his work, or he will produce incoherent, unbalanced superfluity. He who creates in pure fantasy, or as Mr. Jackson says, an irresponsible, emotional creature, who with a pencil in his hand and visions swarming through his brain puts down what pleases him, cannot produce the most significant result without conscious or subconscious use of order, or rhythm, or consonance—otherwise why do poets change words, lines; why do painters wash out, touch up; sculptors refine details, planes, proportions; musicians study and restudy passages for greatest effectiveness, all striving consciously to perfect the emotional and intellectual appeal of their undertakings.

"The artist does not have to apply rules, I grant you. Whirling squares and isoceles triangles may never enter his head, much less find way to his work, but *some* proportion, *some* geometry, *some* mathematics must enter his solution or his vision will be a painting or a picture and not a buildable idea. To throw geometry out of the rear door is to destroy proportion, rhythm, symmetry, scale and character in architecture.

"It is only natural that there should be a great number of unimaginative sceptics, both great and small, who challenge the profound studies of Bragdon, Hambidge and others as gestures toward promised land — beauty for nothing. These are the self-justifiers who dislike the difficult and (for them) impossible task of thinking through the problems of psychology, philosophy, and physical sciences to arrive at a basic truth concerning UNKNOWABLE BEAUTY. It is so much easier for them to pooh-pooh the possibility of discovering anything and depend on their fickle muse—for better or worse.

"But if any of these Philistines take the trouble to read thoughtfully the works they damn so heartily they will find that the authors do *not* offer their findings as *rules*. They make no generalizations about synthetic design via geometry. They do not claim infallibility, nor absolute results, nor tables of perfect proportions. They do offer a sympathetic student facts and findings supporting the theory that mathematics and geometry are the bases of beauty and whether or not a reader agrees with them he is intellectually blind if he refuses to see any value in the enlightening and challenging results presented.

"The fine flights of pure fancy belong to the musician, the painter, the author, and the actress, yet even in their temporal arts mathematics enters, rules, and becomes the willing servant of the greatest artists. No one with a modicum of understanding would say that the arts of music, color, and motion could dispense with mathematics and still have any effect on human emotions. The most thorough grasp of mathematical principles makes the artist master of his medium and frees him from all but the purely æsthetic facets of his creation.

"Mr. Jackson is very unfair in his presentation of what he chooses to call the results of scientific research in architectural design. With an easy flow of words he disguises all of the fine blossomings of knowledge calling them showy by-products, algebraic hash, esoteric laws, and so on. No amount of argument can show the way to one who chooses not to see. Reasoning is lost on a stone. Were Mr. Jackson's article written with less scathing superiority, and more understanding of his subject it would not be expecting too much to find him amenable to a certain degree of correction. However there will always be the immovable doubters and they will not be disallowed until the day comes when many enlightened architects, feeling the spur of a receptive populace, produce beautiful and inspiring monuments as headstones for the scoffers who challenged them to go on.

"I call upon the spirits of the great architects now gone, and the spirit of the great architects now living to found and witness a new era of beauty founded upon truth, upon character, and upon knowledge which combined with deep feeling and keen imagination can so create works of art that no human being is untouched by the greatness of his day."

Look Out for Imposter

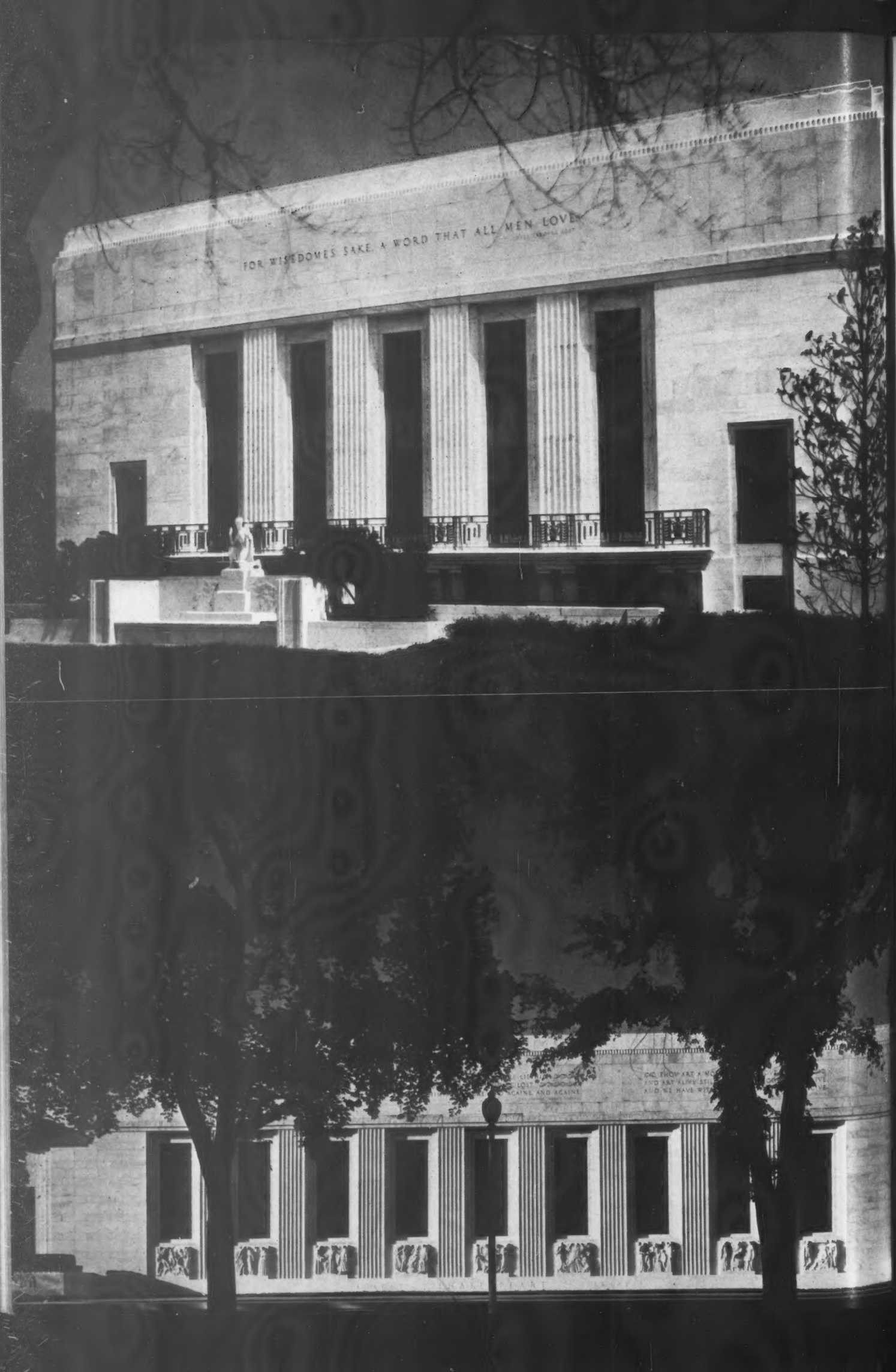
Royal Barry Wills of Boston has informed us that an unknown young man, aged 27 or 28, has stolen from his office a bronze medal, awarded to him in 1934 by Better Homes in America. The thief is impersonating Mr. Wills in cities and towns of New England and borrowing money wherever he can, using the medal as identification. Architects of this region are warned not to lend any money to this imposter and to notify the police in case he turns up.

Exhibition of Pencil Points Competition Drawings

Architectural Clubs and Societies and other organizations that are interested in holding exhibitions of small house designs are invited to apply for inclusion on the schedule for the traveling show of about seventy-five drawings, including prize winners and mentions, submitted in the PENCIL POINTS 1935 Architectural Competition, sponsored by the Iron Fireman Manufacturing Company.

A dramatic black and white composition in pen and ink by Charles Perry Weimer

The Second Street (top) and the East Capitol Street façades of The Folger Shakespeare Library, Washington, D. C. Paul Philippe Cret, Architect, Alexander B. Trowbridge, Consulting Architect. This frontispiece illustrates Mr. H. Van Buren Magonigle's essay (pages 479-485) and is presented to confirm his thesis that it is not necessary to reject the canons of sound architecture in order to create something fresh and distinctive


FOR WISEDOMES SAKE A WORD THAT ALL MEN LOVE

PLOUGH UNDER THE ARCHITECT?

A Challenge to Today's Art

By **W. POPE BARNEY, A. I. A.**

IT is a matter not devoid of significance that today so many of our Architectural Schools are looking for new deans; new leaders out of the slough of despond which has threatened the very existence of the profession. It but emphasizes the fact that the hour has struck for re-examination and re-evaluation of old attitudes and methods in the teaching of the schools. It acknowledges that a newer and broader vision must be gained if the oncoming architect is to find even a field of usefulness for his endeavor, to say nothing of the commanding position a member of his profession should assume in the reconstruction of a demoralized world.

Today, as never before we are standing at the cross-roads asking "Whither?" The breakdown of much of our ancient machinery of living is so disastrously apparent on every hand that the acceptance of a turn-over is in the air. The question is only: how much of a turn-over shall it be? How much shall we plough under to clear the field for a new planting?

For the past few years the field of Architecture in America has indeed, and through dire necessity, been lying fallow—and perhaps to architects more than to any other class of creative workers has that question been driven home—"Whither?"

But is not this fact a confession that a fatal weakness has been allowed to creep into the conception of the architect's function: a confession that he has been losing his vision of the high possibilities and responsibilities of his calling? Is not the fact that more and more the engineer and operative builder have been crowding him out of his own bailiwick; that more and more architecture has come to be classed as a luxury for the rich individual or corporation—an arraignment of the architect's lack of envisioning the full extent of his ability to serve the common weal—a lack of vision for which he has paid a bitter price since the market for luxuries has been closed?

The dictionary definition of architecture as: "Art or science of building, especially for the purposes of civil life" and the Greek *ἀρχιτέκτων*—"Master Builder," suggests, in this period of tearing down and destruction, a profession and a man of immeasurable usefulness: a *constructive* thinker. But to be useful, the "constructive" should today be interpreted on broad and far-seeing lines. It is no time for constructing charming trifles—but now in this era of social chaos, as truly as in the chaos of war, the insignificant must be laid aside for the fundamental and each profession in its own particular sphere must reach out toward its highest conception of service to humanity, and in its schools endeavor to prepare men to solve new problems and meet new conditions. Today is a splendid challenge to man's supreme effort to attain a wise balance in a shaken world. It is a time to slough off the outgrown, the dead ashes of the past, while cherishing the flame which made the greatness of the past. That flame, the spiritual fervor of the creative worker, has sunken low but will be revived, I believe, through the enlarging and clarifying of vision that will be the outcome of the purging of the last few years.

* * * *

The endeavor to meet the changing conditions about us is taking many forms in the various architectural schools. Astonishingly, there are still some too conservative to admit that the conditions *have* changed, despite diminishing enrollment and the signs which he who runs may read.

On the other hand many experiments are being tried ranging all the way from a sound acceptance of functionalism as the basis of study; as the foundation upon which to build—to the extreme experiments where the classroom is turned into an architectural office and projects are worked out, supposedly, as they would be in actual practice: The hypothetical project designed for an existing site and studied from the period of business promotion, financing, etc., to the last stages of the work (theoretically). This method sounds extremely logical and persuasive to the layman but is looked upon with grave concern by the majority of educators. My observation of its working leads me to feel that it rather resembles studying calculus before one learns arithmetic, and I find in the students thus trained a naïve conviction that their youthful essays warrant the most respectful consideration of the professional world. My great objection to this method is that it is putting the cart before the horse; that it is crowding out of the curriculum much which can only be most effectively taught at college and putting in much that the student could more naturally and more wholesomely learn in his period of apprenticeship while he is "getting his experience" in some established architect's office. The hazard of turning loose on the public half-baked architects who feel competent to open their own offices is still only too great though it has been lessened by the establishment of Architects' Registration Boards in most states. A sound form of teaching the aspirant actual office practice is now being worked out under the super-

vision of the Education Committee of the American Institute of Architects, and is known as the "Mentor System" wherein qualified practitioners, to whom service is of more concern than profits, undertake to advise eligible young men in seeking experience in all branches of the practice; specifications, working drawings, bookkeeping, superintendence, conferences with clients, etc., in a balanced ration, so that in actual fact they become practicing architects and are in time ready to be recommended for registration.

The allotted term of study in the architectural school is all too short for training in the underlying fundamentals of the complex profession of Architecture to permit of emphasis upon the application in school of half-digested conceptions of actual office conditions. If architects are to meet the high demands which the times lay upon them, what they must gain in their college course is first and foremost a grave recognition of the part their profession should play in modern life—a sense of the tremendous possibilities and breadth of influence for rebuilding society their training is capable of producing—a feeling that, practicing as it does in the fields of engineering, construction, æsthetics, and the humanities, architecture touches the whole gamut of human life and if mastered in all its branches should produce an individual of such high potentialities that the very scope of his power lays upon him the necessity to use his trained abilities for the common weal, as a sacred trust, as a *profession of faith*—never as a mere profit-making business. This conception of his work leads him on and on to a fuller dedication of his time, to a deeper study of the needs of society. Because his sight has been dimmed, the architect has fallen into disrepute, as a fifth wheel in a practical world, and in times of stress like the present, he is brushed aside. Had his vision been more prophetic he would have foreseen the onrushing need more clearly and probed more deeply into the branches of his craft which would have met that need. He would have sooner recognized that luxury at the top of the scale cannot continue to flourish while the slums are festering at the bottom, and his very humanity would have drawn him to study that phase of modern life—and find an architectural solution for it: and that study would in turn have led him on to recognize that slums cannot be permanently wiped out in an unplanned city and drawn him into the study of city and regional planning. Thus he would have *seen that architecture, in order to continue its* healthy development, must include a recognition of its relation to social science.

In his "Outline of City Planning," Thomas Adams writes: "In its truest form the art of city building is the art of creating the kind of environment needed to produce and maintain human values, *inter alia*, the balancing and harmonizing of private and public needs and interests so that one shall not be unduly sacrificed for the other."

This *balancing* and *harmonizing* is distinctly the function of the architect, as the school should impress upon him. It runs through all his work, whether in design, or in conduct of his practice as impartial judge and arbiter between the claims of conflicting interests, or in the larger implications of city planning. It calls for fair-mindedness and rests upon a developed character which again emphasizes the dignity and responsibility of the profession.

This expanded conception I feel is of fundamental importance in the teaching of architecture. It is a strong challenge to youth to consecrate its life to a constructive work for the service of humanity: a challenge which will awaken that spiritual fervor eventually to flower into significant creative work.

Although I am in complete agreement with the teaching that functionalism is the basis of sound planning, I cannot go so far as to hold with the school which, in the field of design, would cut off all connection with the past, arguing that, as we are working with new problems and new materials, therefore a looking backward is irrelevant. I am however in entire sympathy with the honest realism of the college men who have dubbed a certain romantic modern-mediæval dormitory "Darkness Hall," and who reasonably feel that modern methods of construction justify us in demanding that the need for sunlight be frankly met.

Given the materials and construction methods at their command, the aspirations of the Greeks and Cathedral builders were functionally expressed for their time—and produced works of beauty—and with new materials and construction methods, the needs of our times can be functionally and beautifully met if we but feel for our work the spiritual fervor and inspiration which they exemplified. This does not mean either that we shall work less directly than those masters of the past nor yet that we need cast aside the rich heritage they have bequeathed us, but that through reverent study of their great work our sensitiveness to beauty of line and mass and proportion shall be so refined that with a perfectly direct approach, sacrificing no logic to precedent, we shall yet produce work of greater purity and nobility because of our assimilation of the qualities we have admired in them.

Due, perhaps, to the fact that we all admit that the Orders as motifs have ceased to be a part of the vocabulary of modern design, it has become increasingly the fashion of the schools to relegate them to the limbo of outer darkness. I look for the day, however, when they will be re-discovered —not to be integrated bodily with our work, but for the great delight and cultural value they hold for the student. I cannot forget my first impact with the sheer beauty of a Doric column as rendered in a Beaux-Arts Analytique problem. This

seemingly casual experience turned me overnight from a callow and contented student of engineering into an ardent aspirant for architectural study. It awoke in me an ambition to create forms of beauty which has never left me; and later, the same thrill brought me literally to my knees before the Elgin marbles to study—to memorize if possible—the crisp yet exquisitely subtle curves of the mouldings of a fragment of a capital (inappropriately placed on the floor), as one would try to memorize some beautiful movement from a Beethoven Sonata—not for the sake of later imitation in one's creative work, but for the cultural enrichment of one's life which they afford.

Such storehouses of delight and inspiration are open to us all, and it seems to me that it immeasurably impoverishes the imagination of our young students to omit the training of hand and eye gained by the drawing of them. I know a very modern poet who professes never to have heard of Keats, but this boast does not add to my respect for him nor make me feel that his work is necessarily more vital for this omission in his cultural background.

Because, in the past, schools have dwelt too much on *styles* and not enough on *style*, the word "stylistic" has reasonably fallen into disrepute. I like to think of style, not as a recall of old motifs, but as the result of a complete mastery of one's craft, a mastery which attains so fluent a facility in the solution of a problem, that the worker can bring an unconscious personal grace into his design which stamps it with his own individuality and makes the work of each distinguished architect instantly recognizable, so that one can say: "That is the work of Bulfinch—or of Goodhue." This quality, which only comes as a result of drilling and is the fruit of hard won mastery, constitutes the joy of creation. It is this joy of the creative artist which the world needs today and which the schools should seek to foster by awakening enthusiasm in the student and thus making him realize the worthwhileness of the immense labor he will have to accomplish in the attainment of his goal.

Because, admittedly, the young architect must face grim reality and hard practical problems when he leaves the schools, I do not feel that that fact necessitates bringing such grimness or emphasis upon the practical phases of his work into the academic halls as to crowd out the delight which should be the mainspring of creative work. What*ever legitimately builds up the student's sense of the richness and rapture of living, as a glorious* and rewarding adventure, I feel is of immense importance for the schools to foster, until the very difficulties to be overcome in the complex problems presented for his solution will be faced with the enthusiasm of a sportsman for his favorite form of sport.

It is this attitude which should be encouraged by the school faculty. It will develop in the student a driving power that will not let him rest content with a conventional solution founded upon precedent, but will urge him on to original thought and research, determined that his work shall make a fresh contribution to whatever field he is studying and his solution be the uniquely right one for each problem. And such a spirit going out from our schools—a spirit impatient of conventional and perfunctory standards and seeking with zest and enthusiasm to carry research further and accomplishment higher—is our only hope of a renaissance in architecture, a renaissance which will restore the architect to the place in society he should hold as an essential leader of constructive vision.

One may say: "This is a large order." Truly it *is* a large order, an order which points to the type of man needed to make the architectural schools in the highest sense successful. Only fire and enthusiasm can awaken fire and enthusiasm — only a driving power toward a clarified vision can foster driving power and unfold such a vision in the student. The prophet's words are as true of the schools and the profession as of the individual—"Where there is no vision, the people perish."

It is a tragically cynical saying which is current among architects, that only the men who are not good enough to succeed in practice go into teaching. Surely it is in the schools that dynamic men are most needed: men who are willing to sacrifice the large fees their outstanding ability commands, and retire to the comparative obscurity of the classroom, that through the unselfish devotion of their lives, a new race of architects may be born—a race not drilled by little men in little routines, but fired with a new conception of the vastness and the glory of their profession, even as Michelangelo and Alan of Walsingham have been fired before them.

Such fire does not spring from copying out of books, but from original creative thinking. There is immense wisdom in Emerson's words: "Books are for the scholar's idle hours." Books may stir the imagination, but there wisdom must be assimilated and transmitted into individual vision.

The economic fluctuations—war or depression —may for long periods make the visions of man stern. It may be that for a generation the architect will have to relinquish the dream of a beautiful flowering of his art: slums may have to be torn down and low-cost housing to be built: it may be *foundation digging rather than the spires of a Chartres which falls to his lot, but it is all part of* one unity—part of a constructive effort toward the good life, and as such one can feel the thrill of being a part of a great whole. Upon the sound foundations laid one can have faith that beauty will flower in good time, and in this thought one can rest content.

In looking down the centuries of architectural

development one can see the past and present as an indissoluble unity, as an ebbing and flowing of human life and achievement, ever illustrating cause and effect: the past preparing the present and the present nurturing the future. One can see architecture as Vitruvius saw it—composed of "three conditions: commodity, firmness, and de*light.*" *Perhaps today the left wing of the profes*sion is too prone to stress the first two qualities of this trinity and to overlook the last, but I believe the balance will be restored, and, as a living plant, architecture will survive complete: firmness—the roots, commodity—the branches, and delight—the flower—but the balance will only be restored through a renewed vision and consecration on the part of the individual members of the profession and the teachers in the schools. When that is *achieved the architect will prove himself too essen*tial a part of the body politic to be ploughed under.

Two decorative figures by Georg Lober, Sculptor, to be placed in the doorway of the Children's Building at Broadacres Sanatorium, Deerfield, N. Y., Bagg and Newkirk, Architects. The figures, which represent "The Princess and the Pea" and "The Emperor and the Nightingale," are to be done in limestone

ARCHITECTS OF EUROPE TODAY

7—Van Der Rohe, Germany

By GEORGE NELSON

ON the top floor of a rather dowdy old house in Berlin there lives a man who, in spite of having built little, spoken less, and written not at all, has somehow come to be considered one of the greatest architects of his time. Such is the power of personality and an idea.

Up to ten years ago he had built virtually nothing of his own, and it was only in certain groups in Germany that his influence was making itself felt. Today he occupies a position which is unique—even in Germany—and he is almost as well-known as the more widely publicized Le Corbusier. In spite of his unwillingness to dramatize himself, Miës is no dreamy recluse to whose garret door the world has beaten a path: the luxuriously simple apartment in Berlin is in no sense a garret, and for this ample, well-fed German the meagre life holds no attractions. He likes his food and knows his wines, and with a sufficient quantity of both inside of him he can become a charming and mellow conversationalist.

It has been my purpose in this series to show the work of some of Europe's outstanding architects, not as the automatic results of those vast and vague influences known as "economic pressure" and "social trends," important as these are, but rather as the creations of definite and mature personalities expressing themselves according to the possibilities of their time. And if this is borne in mind it will be seen that Miës' work, culminating in the Tugendhat house, which in one stroke crystallized the ideas and aims of designers the world over, could never have been conceived, let alone built, had this man been a dour dyspeptic for example, or anything, in short, but what he was.

Of all possible architects Miës was the hardest to interview. He was polite but very frankly bored by the prospect of talking with a stranger, and he did nothing whatever to help out when his interviewer became enmeshed in the abominable intricacies of German grammatical construction. Catch questions, which had set off Le Corbusier on interminable orations, Miës disposed of with an indifferent phrase. When I mentioned the attacks on Le Corbusier for his frequently excessive use of glass he brushed the matter aside with the comment, "The glass façade is not modern architecture." He had known the fiery Swiss in Peter Behrens' office, but it is not likely that they had much to say to each other. A certain intelligent skepticism and breadth of view are characteristic of Miës, and it is very probable that Le Corbusier's tendency to carry theory to extravagant limits might well leave him cold. On the subject of Frank Lloyd Wright he was more willing to talk and, like most of Wright's European admirers, found it hard to understand why he had had so little influence in his own country. Wright, said Miës, was the greatest artist in setting buildings in a given landscape who had ever lived. So much for the prophet without honor in his own land! As the conversation progressed to matters of mutual interest, Miës gradually unbent and we both had a much better time. I left enormously impressed by the keenness and extraordinary personal force of the man.

Miës van der Rohe was born in Aachen, in 1886. His father, a stone mason, had hopes that the boy would continue in the business, but there was a certain quality in his son that he mistook for stupidity. He apprenticed him to an architect, thinking that in this way he might acquire a certain amount of business acumen—curious idea! A story which Miës himself tells of this time indicates with what unconscious accuracy his father had selected his profession for him. It happened that during the preparation of an important drawing of an elaborate ceiling in the Renaissance manner the head designer fell ill, and there was nobody in the office who could be trusted to finish it. Precisely like the child wonders who appear in the stories of the Italian Renaissance, Miës stayed late one night and finished the drawing. There was a furor, of course, and when it was discovered who had done it Miës was promoted from broom to drafting board. Shortly after this rise in life he went to Berlin, worked with Bruno Paul for a time as furniture designer, and then went into the office of Peter Behrens. Behrens was the greatest single influence in modern German architecture, and in his effect on his assistants he was very like the late Bertram Goodhue. Here Miës finished his architectural education and was entrusted with work of importance. After about three years of this, however, the association came to a sudden and violent end. Behrens entered a competition, and Miës, of course, worked on it. Apparently unsatisfied with Behrens' solution he did one of his own outside the office, winning first prize with it. The scene which followed, as Behrens swore with mighty Teutonic oaths that Miës had copied his scheme, may well be imagined. Miës, no weakling

himself, did a bit of bellowing on his own, but finally wearying of the argument, announced that he was resigning and going to Switzerland to ski. The resignation was quite unnecessary, but ski he did, for five months. When he returned he opened up an office of his own. Behrens never forgave him.

It was not until several years after the war that he was heard from. In 1921 and the years immediately following he published a brilliant series of studies: the Glass Skyscraper, which proved nothing; a cantilevered office building consisting of alternate horizontal bands of window and spandrel, a scheme used by Mendelssohn with great effect on Columbus Haus in Berlin; and several country house projects. None of these, it will be noted, were ever built; but they were published far and wide, and by means of the printing press Miës entered upon the road to fame.

It was in 1928, however, that he showed, in a fashion that left no room for doubt, that he was no "paper architect." In this year a young lady came into his office, said she was getting married and going to Czechoslovakia to live, and that as a wedding present her family wanted to build her a house. The reason she came to Miës was that someone in her family had a house that Miës had built, and she wanted one exactly like it. The house she referred to was an innocuous Empire villa—Miës' first commission—of which he was bitterly ashamed. To be asked to repeat this house was something of a blow, but swallowing the words which sprang to his lips Miës said he would be enchanted to serve her. Two years later the young lady and her husband moved into their new home —the Tugendhat house.

The Tugendhat house is Miës' masterpiece, justly world-famous, perhaps the finest modern house that has been built. But it could hardly be considered even remotely like the Empire villa his client thought she was going to get. What marvellous powers of persuasion the man must have used, what telling arguments he employed can only be guessed at; it was in any case a magnificent piece of salesmanship. The clients, incidentally, were delighted with the house, and they have shown it with pride to the throngs of visitors who have come to see it. In this connection, the remark of one of his associates is interesting: "All his clients are still his friends." What higher praise

An apartment in New York. Miës' fondness for simplicity and solid luxury is well exemplified here. The heavy leather of the chairs and their sturdy frames, the use of quantities of material to produce an effect of richness are all typical of Miës' decorative treatment which distinguishes him from his imitators

could there ever be anywhere for an architect?

The Tugendhat house is too well known to justify any extended discussion of it here. Its chief interest to us is to note how closely it reflects the personality and idiosyncrasies of the architect. Miës' fondness for space, for simplicity, for rich materials all find expression here. In the glass-enclosed downstairs portion space literally flows, interrupted by an occasional partition, but never enclosed. The dining room is not a room at all in the conventional sense, but a portion of the living space; the same is true of the so-called living room. The feeling of movement that this type of arrangement gives, and its ample vistas, are enormously stimulating. Miës hates and despises cheap materials, but for once he indulged his tastes. An onyx wall, selected after months of searching for the right material, the curved macassar wall, the hundred feet of plate glass window and silk curtains to cover them—all these were things he really enjoyed working with. Into his search for the onyx he put a fantastic amount of time and money, demonstrating once again how well founded were his father's fears—but in the end he got his wall, which was all that interested him. Today, when he makes an occasional visit to Brno, he settles his bulk into one of the comfortable metal chairs, looks at his creation with content and says, "Now there is a *wall!*"

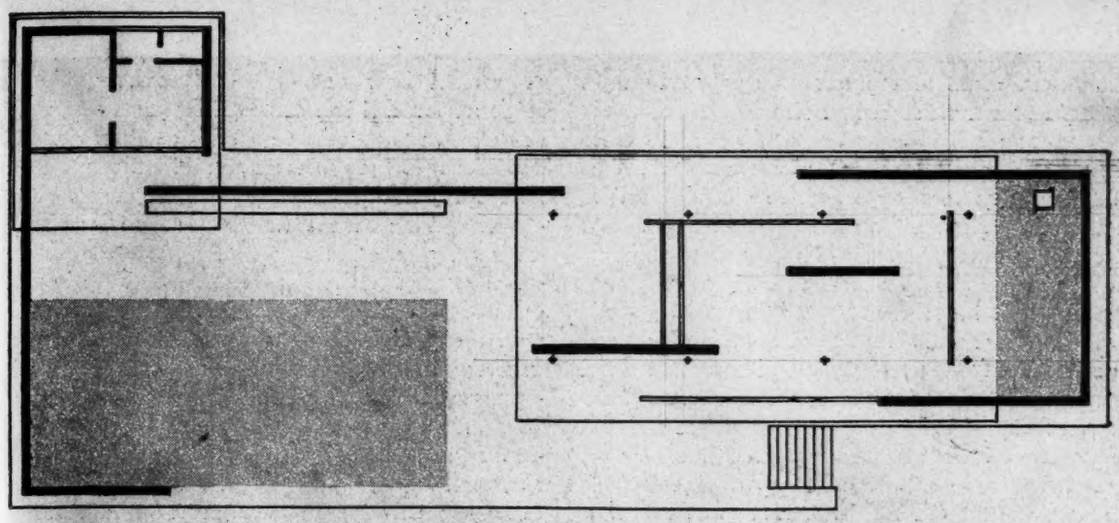
Miës designed the first metal chairs in Germany. Others were working on them, and that he did any at all was accidental. He designed a silk exhibition room in Berlin with Lily Reich, his collaborator on most interiors, and when the room was finished he suddenly remembered that there were no chairs. Unwilling to put common chairs in this rich setting, Miës went back to the office and in one evening designed the chair that has since been copied all over the world. Four days later, when the exhibition opened, the chairs were there. They were a great success, and a manufacturer made arrangements with Miës to produce them. He made a slight variation in them, however, and Miës in a rage cancelled the contract and bought up all the chairs that had been made. Anything that went out under his name, he stormed, had to be perfect.

If Miës has built few things, he has by no means been inactive. He was one of the founders of the Deutsche Werkbund, that powerful combination

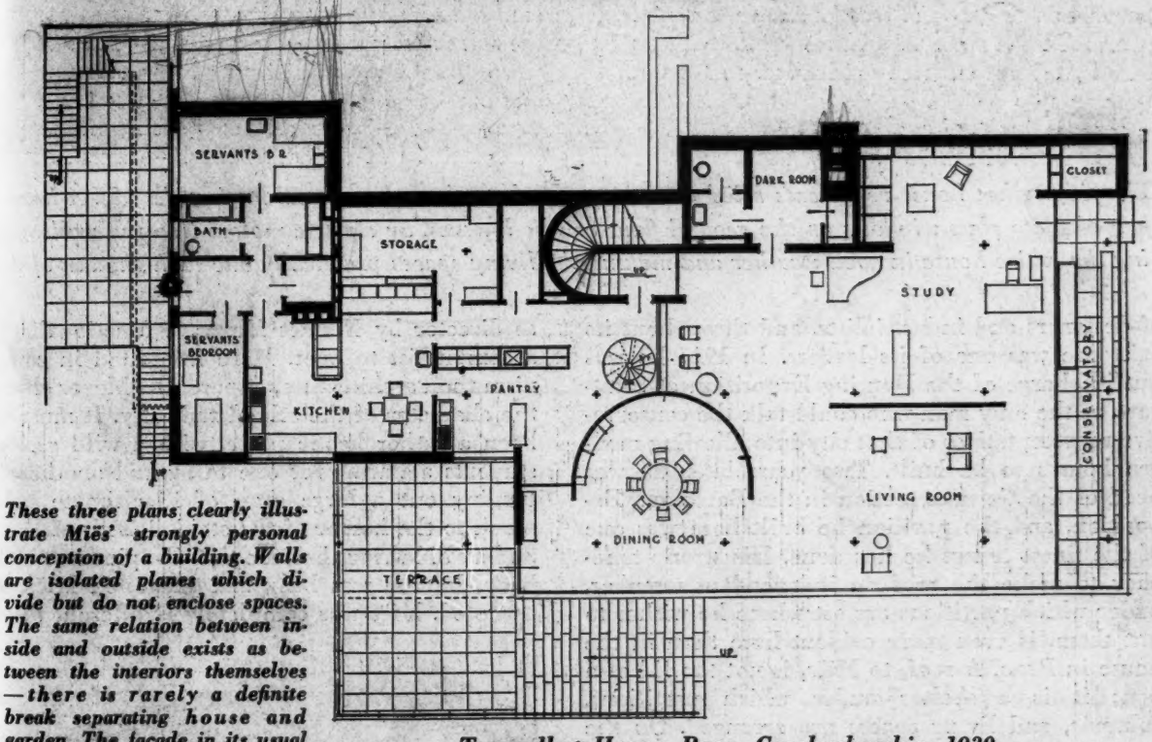
"There," says Miës, "is a wall . . . . . " In his realization of the enormously rich decorative possibilities of natural materials, Miës is unique among modern architects. Unlike his more ascetic confreres he argues that something has to be done to relieve the harshness of the bare interiors found in today's work

The German pavilion—Barcelona Exposition, 1929—a brilliant composition, notable for its proportions and use of materials. The conception of the roof as an independent slab is emphasized with great effectiveness by the use of different materials in the vertical planes which meet it

the roof as an independent slab is emphasized with great effectiveness by the use of different materials in the vertical planes which meet it

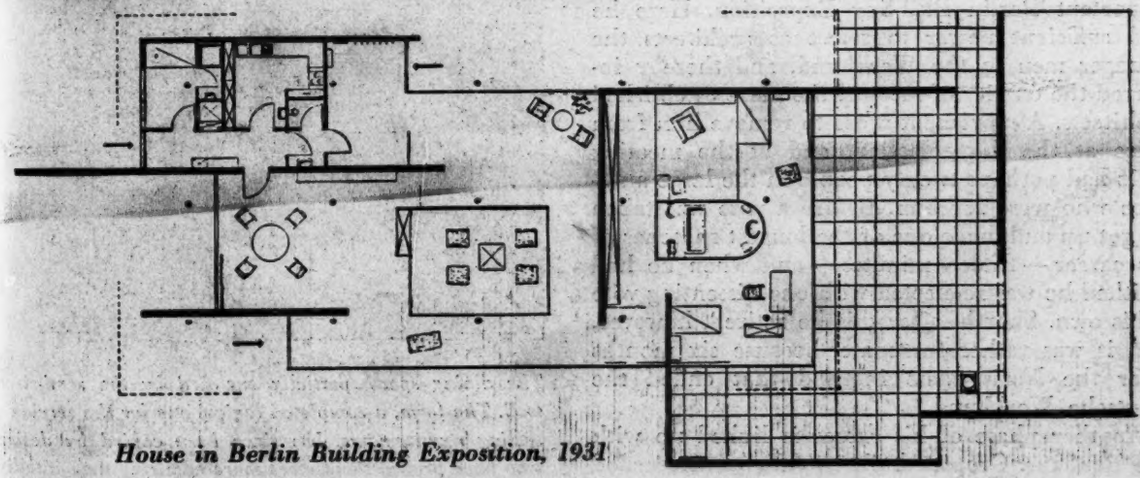


German Pavilion, Barcelona International Exposition, 1929



These three plans clearly illustrate Miës' strongly personal conception of a building. Walls are isolated planes which divide but do not enclose spaces. The same relation between inside and outside exists as between the interiors themselves —there is rarely a definite break separating house and garden. The façade in its usual sense does not exist

Tugendhat House, Brno, Czechoslovakia, 1930

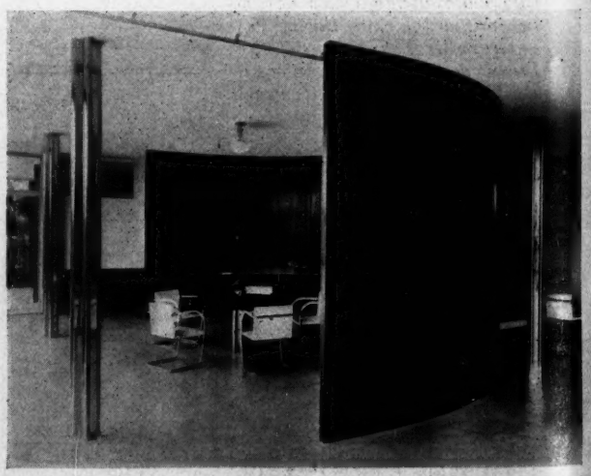


House in Berlin Building Exposition, 1931

The Tugendhat house represents Miës' closest approach to the conventional modern façade. A hundred feet of plate glass windows on the ground floor can be lowered by electric motors into the walls, opening the entire house in good weather and making the living spaces practically one with the out-of-doors

of designers and industrialists, and throughout its existence was one of its leaders. In 1927 he was put in charge of the Housing Exposition at Stuttgart, as the only man who could talk the conservative representatives of that city into allowing modern houses to be built. Two years later he was head of the German section in the Barcelona Exposition, and the pavilion he built here was one of the finest things he has done. His strong tendency to make the roof an independent member, under which partitions are set where he wishes to put them, is even more evident here than in the house in Brno. A roof, to Miës, is not the lid of a box; it is a shelter under which partitions, columns, and living spaces are arranged. On the strength of this work he was made director of the important Berlin Building Exposition. Here he had sufficient power to select as architects the younger men in the Werkbund, and thereby incurred the enmity of most of the more established architects. A movement arose to remove him from office at the next election, and at the meeting Miës had perhaps twenty people in the large audience who were for him. Before a vote was taken he got up and made one of the longest speeches of his career — fifteen minutes — and when he had finished he was re-elected with one dissenting vote —his own. Shortly after this he retired, however, and it was rather fortunate, because six months later the Nazis came in, and that ended the Deutsche Werkbund.

Another phase of his career is linked up with the Bauhaus. Gropius built it, and was succeeded as director by Hannes Meyer, a functionalist and a communist to boot. More interested in communism than architecture, apparently, Meyer changed the character of the school radically. It must have been a rather hectic place, with a wild group of students agitating for one thing and another, and turning out a large crop of illegitimate babies, much to the horror of the staid citizens of Dessau. So bad did things become that Gropius was invited back, but he was busy and suggested Miës, who accepted. Miës was completely indifferent to com-



The dining space, partially enclosed by the semi-circular wall. The form, a completed logical one for the serving and seating requirements, has since been copied by designers who have proved themselves more admiring than intelligent

A view of the interior of the Tugendhat house, showing the light and spaciousness of the interior. Heavy foliage outside protects the room from glare. The use of partitions to organize the living spaces is well illustrated here. Reference to the plan on page 457 will show more clearly how this is accomplished

munism, or any political system, for that matter, and his students objected to him violently, calling him a reactionary. He stayed a year, however, doing some interesting work. Gropius had just finished a study of a tract of land in Berlin, proving that the solution of the housing problem was to put everybody in twelve-story houses, set a considerable distance apart. Miës, never much taken in by this sort of thing, put his students to work on the same tract of land, and proved that the same number of people could be settled for the same amount of money in little two-story houses.

First of the famous metal chairs, designed overnight by Miës and since freely copied all over the world, here used with excellent effect against a background of metal and glass

This little experiment showed exactly what Miës wanted it to show, that there are several ways of doing almost anything. Most of his students were too busy talking to get the idea.

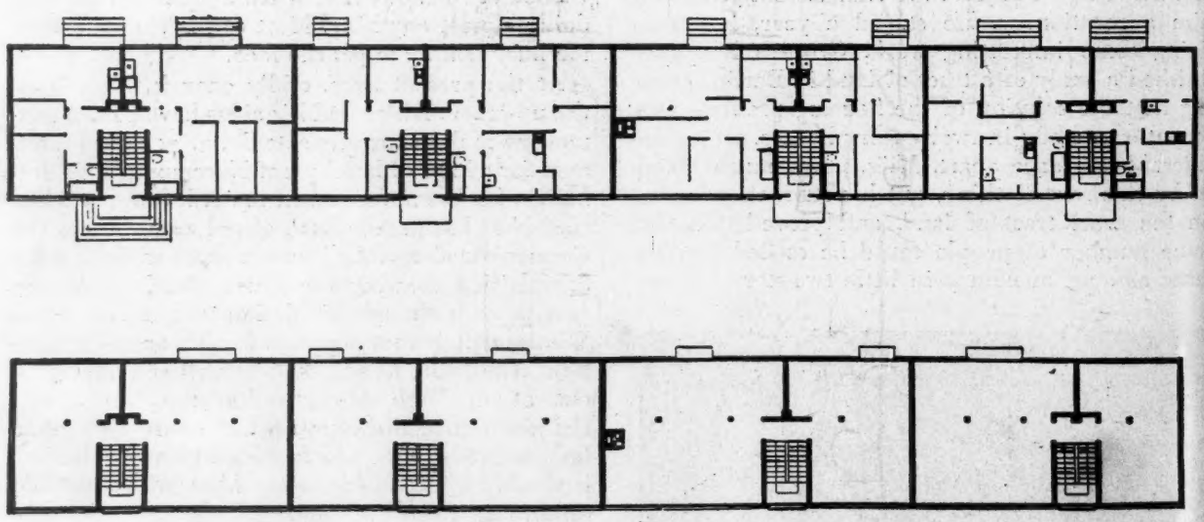
At the present time, oddly enough, Miës is on the up-grade. Hitler and his aides have condemned modern architecture repeatedly, evincing a preference for a kind of bombproof Nuremberg style, but Miës, who has never shown much love for pitched roofs, has been made head of the architects in the German Academy. And only a short while ago his competition drawing for a new Reichsbank won first prize, although his design will not be built. Whatever it is that accounts for his enviable position, it is to be hoped that he will get some jobs out of it. With Mendelssohn, the Tauts, and Gropius out of the country, there surely ought to be a commission or two for those who remain, and it would be interesting to see what Miës would do on an important building.

If this picture of the man is incomplete, it is because his career, more than that of any other living architect, has been one of great promise and little realization, and the story of it leaves one with the feeling that more must be forthcoming. This is only a feeling, however—he is living in an uncertain country under an unpredictable government. He has done the Tugendhat house, to be sure, and his pavilion in Barcelona was a major achievement of a kind of abstract architecture, and the sum total of his work, if small, is important. As for the man himself, he is a sure, sensitive artist, and in his handling of space and feeling for

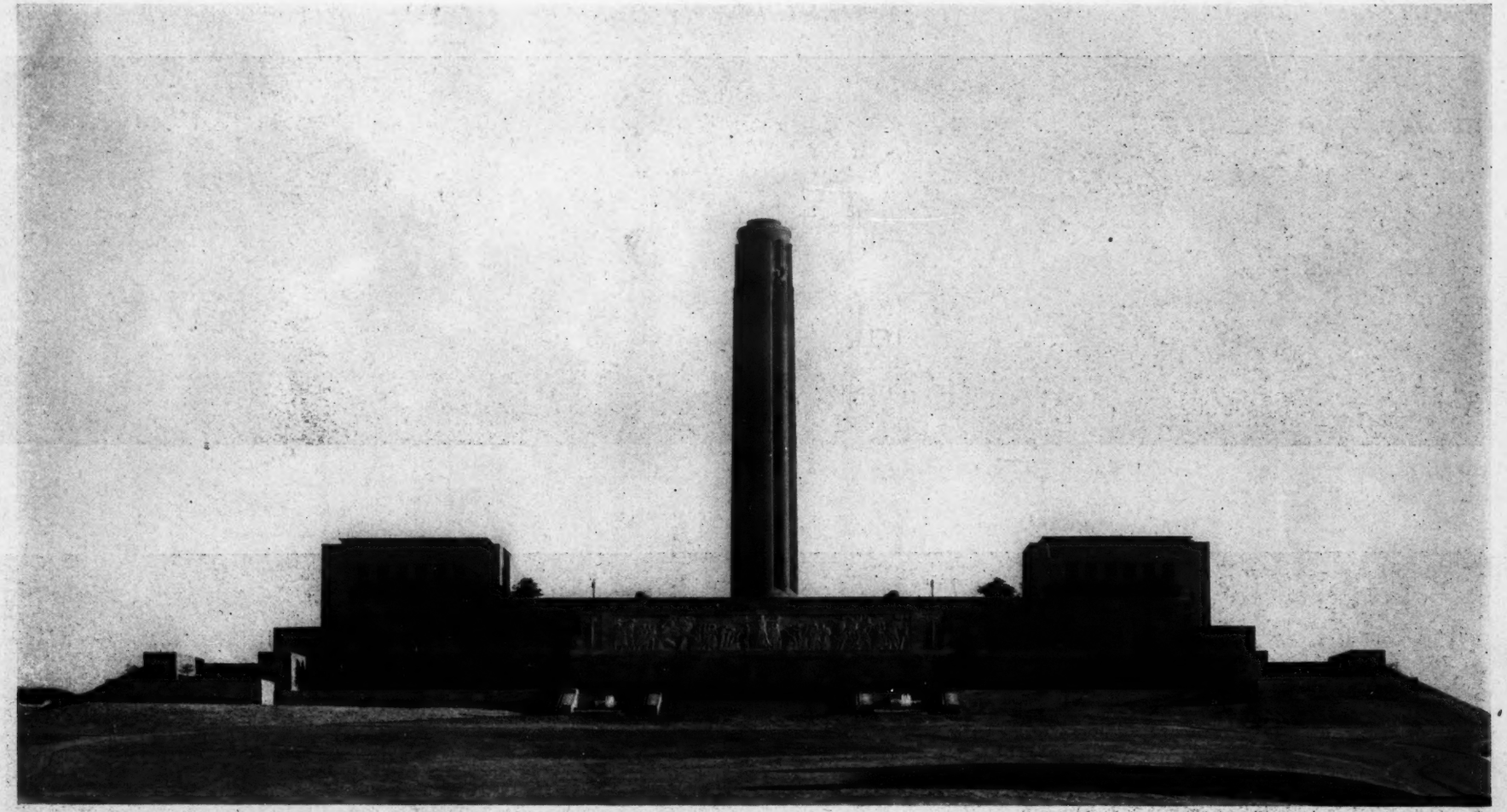
material he has no superior. He is brilliant, slow, affable, and vain. Impractical, utterly uninterested in politics, the social or economic aspect of architecture, he is paradoxically the only one among Germany's great modern architects who has anything like a sure position in the country at this time. Quiet and reserved, he nevertheless could fly into a tantrum like a petulant child when a manufacturer made a minute change in the design of his chair—an attitude not unlike the "Art for art's sake" of the 19th century. At the present moment he refuses to release any more of his photographs for reproduction in America because it seems that someone copied something he did and he is determined not to let it happen again. Such conviction of his own importance is a curious but not inconsistent part of a complex personality. Physically he is strongly and heavily built, but lazy. A fine draftsman, he prefers to have his drawings done for him, and if sitting is the final test of a chair, the metal chairs in his office leave nothing to be desired. Miës, the academician, and former professor in the Bauhaus, has no use whatever for schools, and delights in listing the outstanding men in architecture who never saw the inside of one. His reaction to a remark about the Beaux-Arts was brief and to the point. "It's dead," he said.

As I got up to leave I noticed a beautiful engraving of an Ionic capital, prominent in the modern room, and asked what it was doing there. Miës looked at it seriously for a moment before replying. "The old architects," he said finally, "copy this sort of thing. We appreciate it."

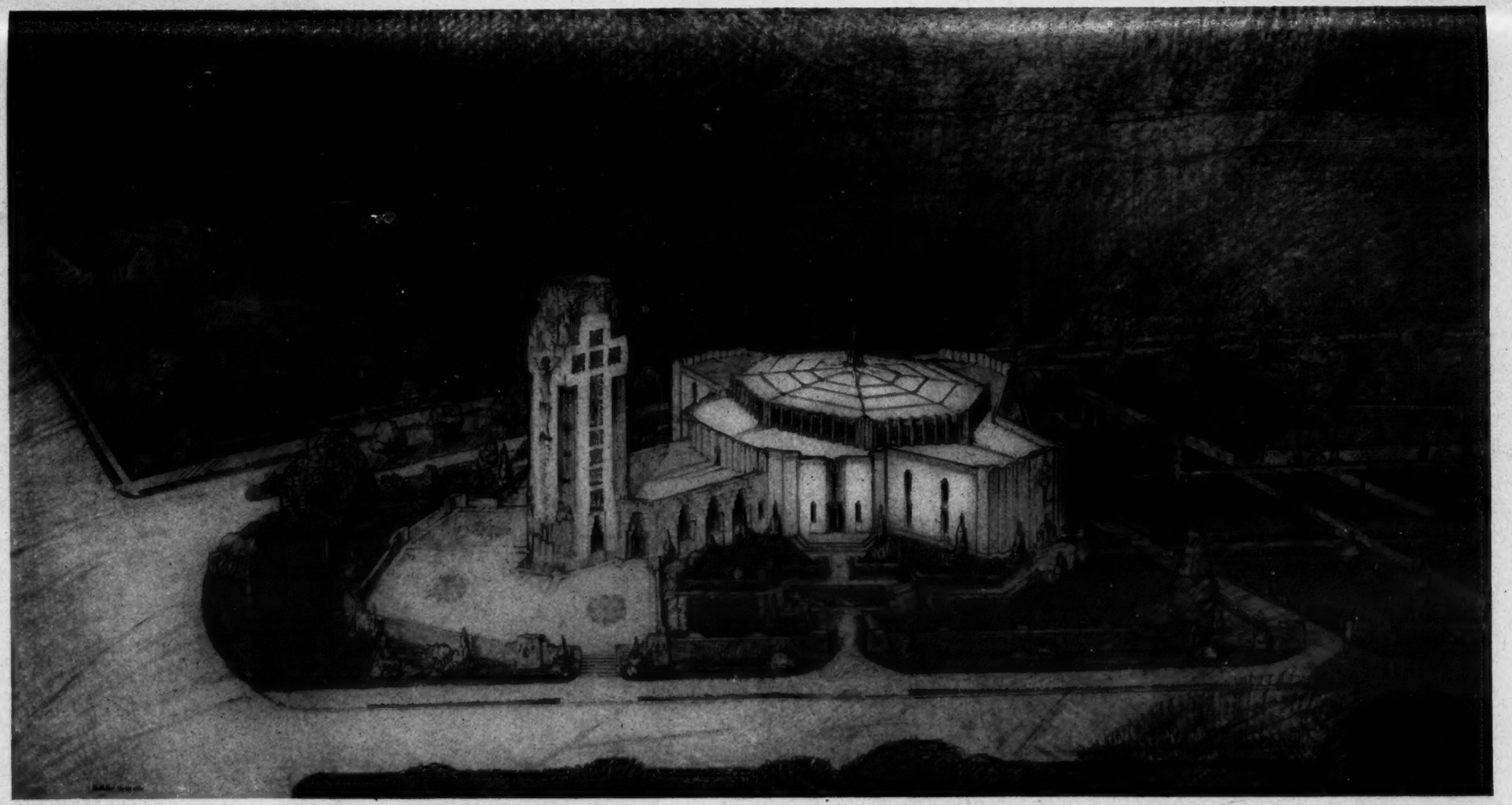
Apartment House—Stuttgart—1927. In this, his first steel building, Miës showed how clearly he understood the basic principle of its use: repetition of a unit. The construction system is simplicity itself. The regularity of the plan is reflected in the exterior. Only in the arrangement of individual apartments do his personal preferences find expression. Plans of ground and typical floors shown below



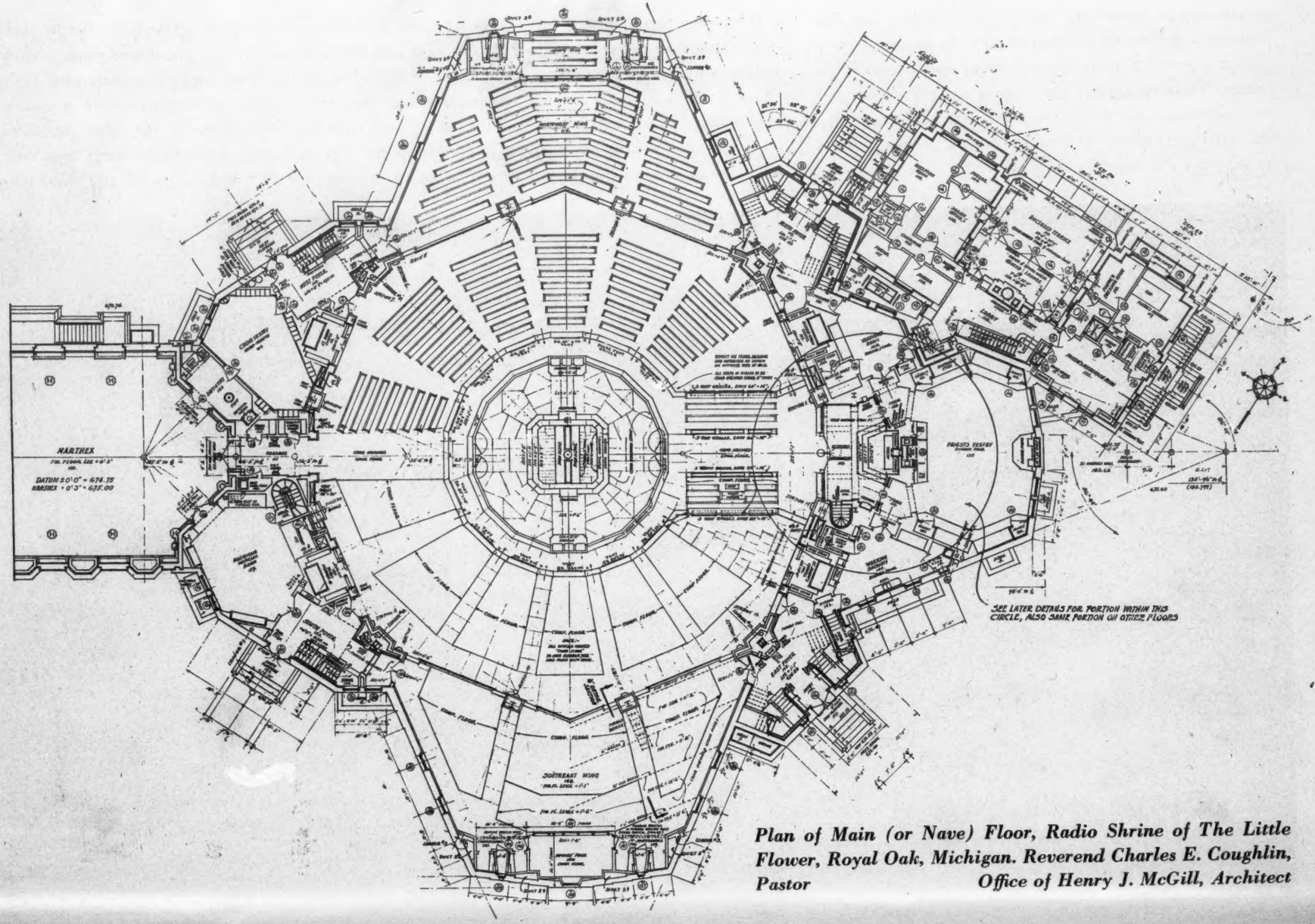
The horrors of war contrasted with the virtues of peace as depicted in a relief sculpture by Edmond R. Amateis for the base of Kansas City Liberty Memorial. The central figure represents Peace Victorious. The monument itself is reproduced on the following page, showing the position of the sculpture. Above is the effect with natural illumination and below with artificial lighting: changed shadows make the two views quite different



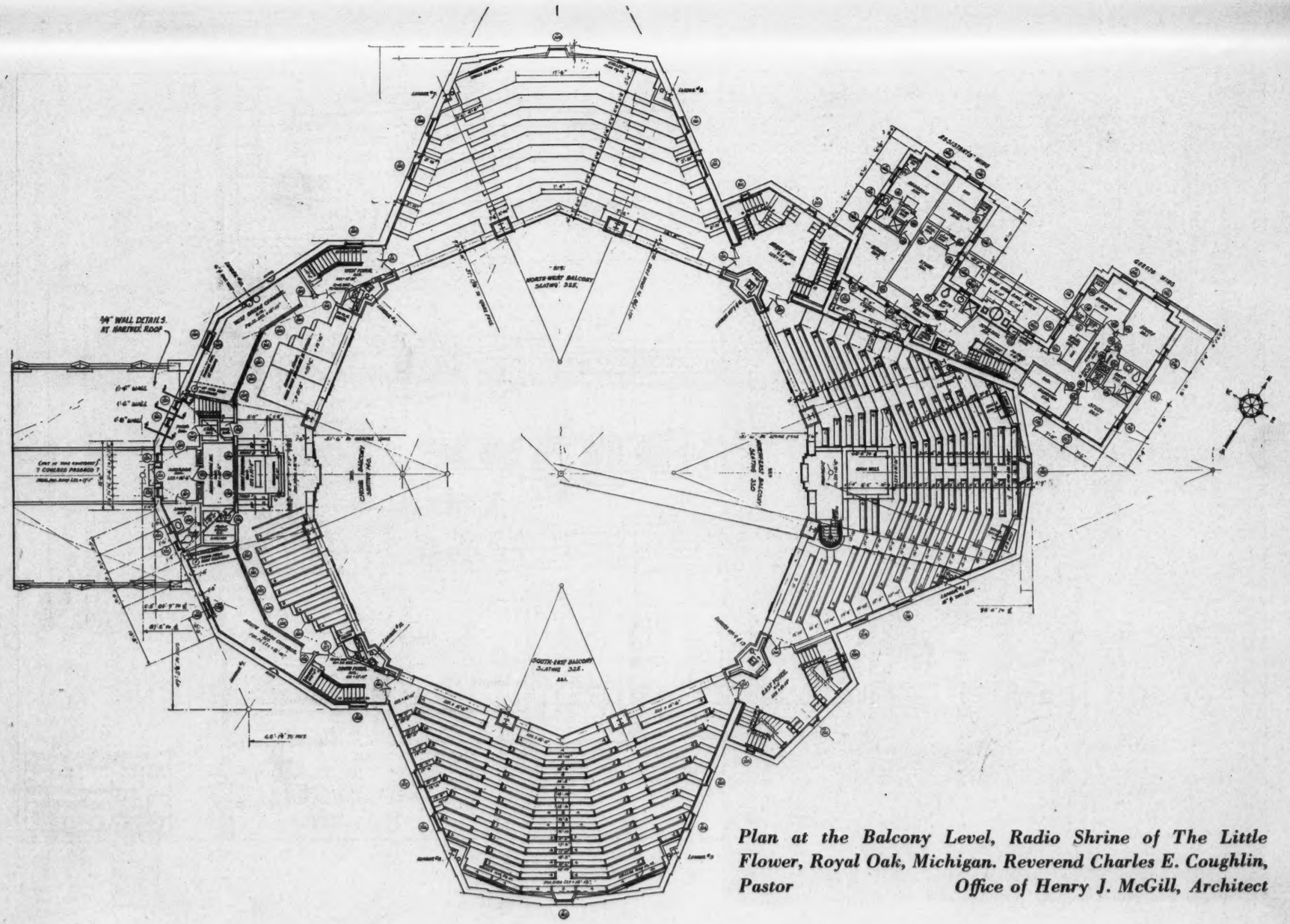
The Liberty Memorial, Kansas City, originally designed by H. Van Buren Magonigle, Architect. Alterations and additions by Wight and Wight of Kansas City under whose direction the band of sculpture by Edmond R. Amateis was recently executed. The panel is 18 feet by 150 feet long



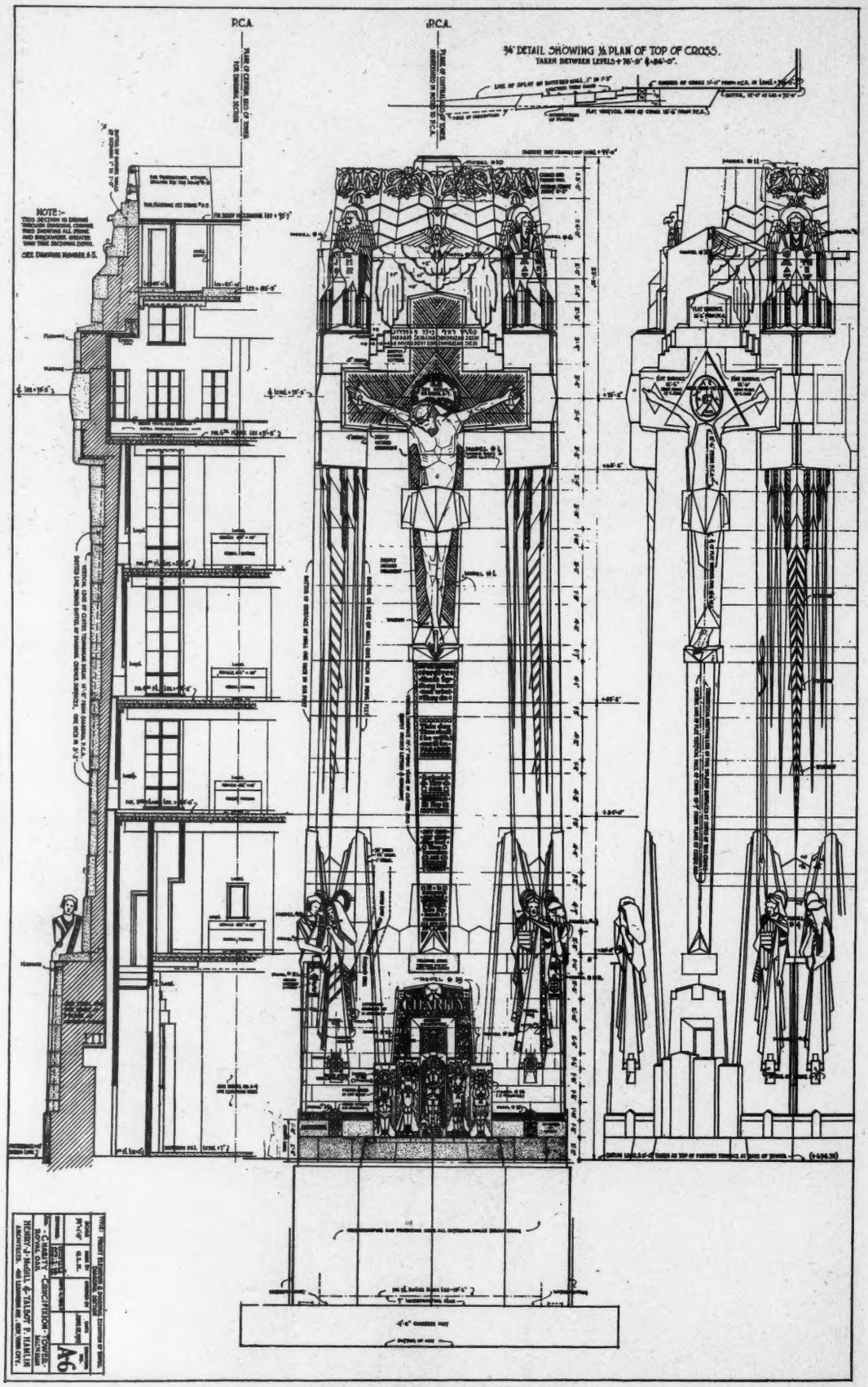
Bird's-eye Perspective Sketch of the Radio Shrine of The Little Flower, now under construction at Royal Oak, Michigan. Reverend Charles E. Coughlin, Pastor. Office of Henry J. McGill, Architect. The drawing shows the Charity Crucifixion Tower facing west. It is connected with the octagonal body of the church by the narthex. There are three wings with intermediate foyers which face the four points of the compass. The church is entered through these foyers and the narthex. Seam-face granite will be used for the main exterior walls with limestone trim around doors and windows. The ends of the side wings will be of limestone. The lantern will be of precast slabs faced with copper and with nickel-chrome steel combined integrally with the concrete backing of the slabs. The structure will be surmounted by a large cross of nickel-chrome steel. Some of the architect's working drawings are reproduced on the fifteen following pages showing not only general design but many of the details


NARTHEX
SOUTHEAST WING
PRIESTS VESTRY
SEE LATER DETAILS FOR PORTION WITHIN THIS CIRCLE, ALSO SAME PORTION ON OTHER FLOORS

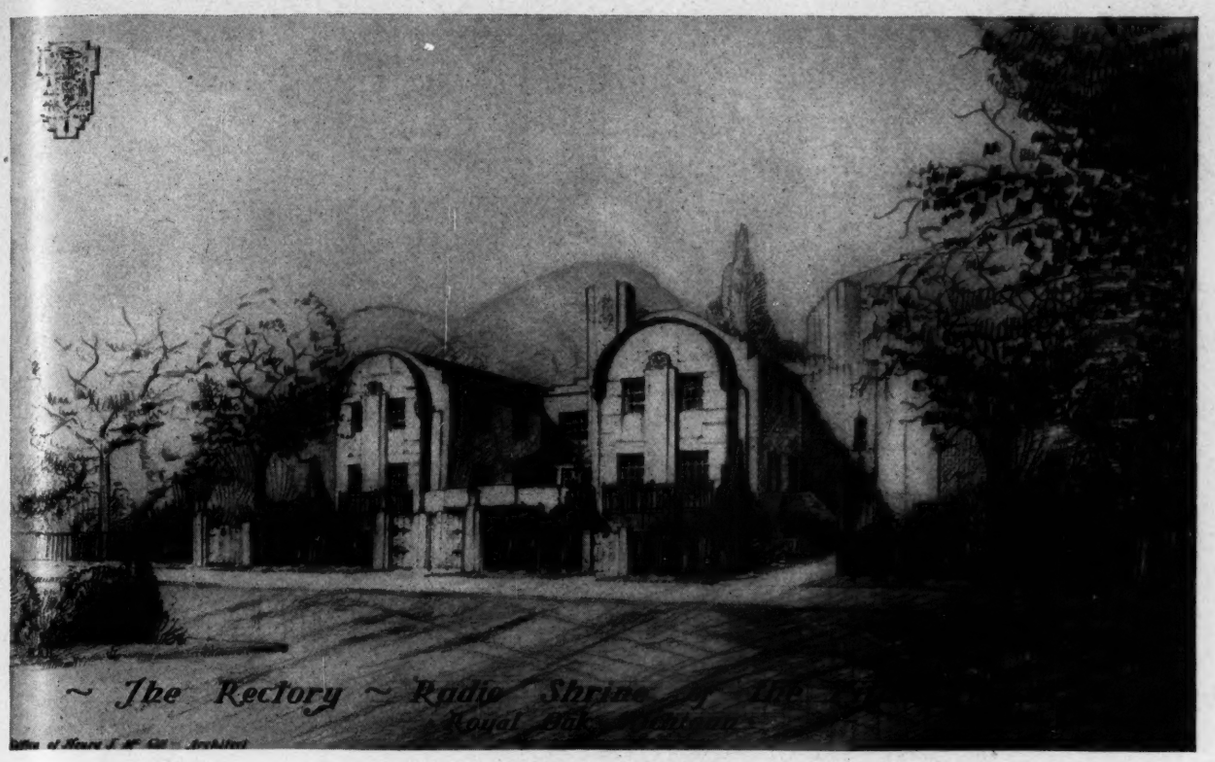
Plan of Main (or Nave) Floor, Radio Shrine of The Little Flower, Royal Oak, Michigan. Reverend Charles E. Coughlin, Pastor *Office of Henry J. McGill, Architect*



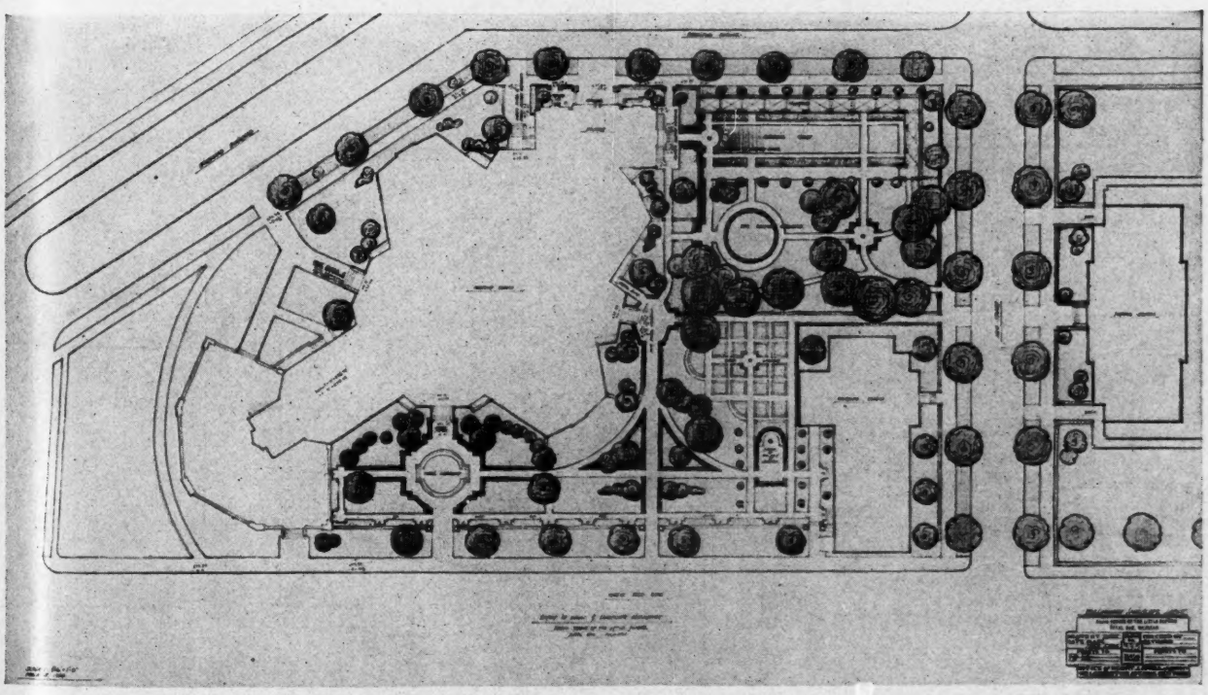
Plan at the Balcony Level, Radio Shrine of The Little Flower, Royal Oak, Michigan. Reverend Charles E. Coughlin, Pastor *Office of Henry J. McGill, Architect*



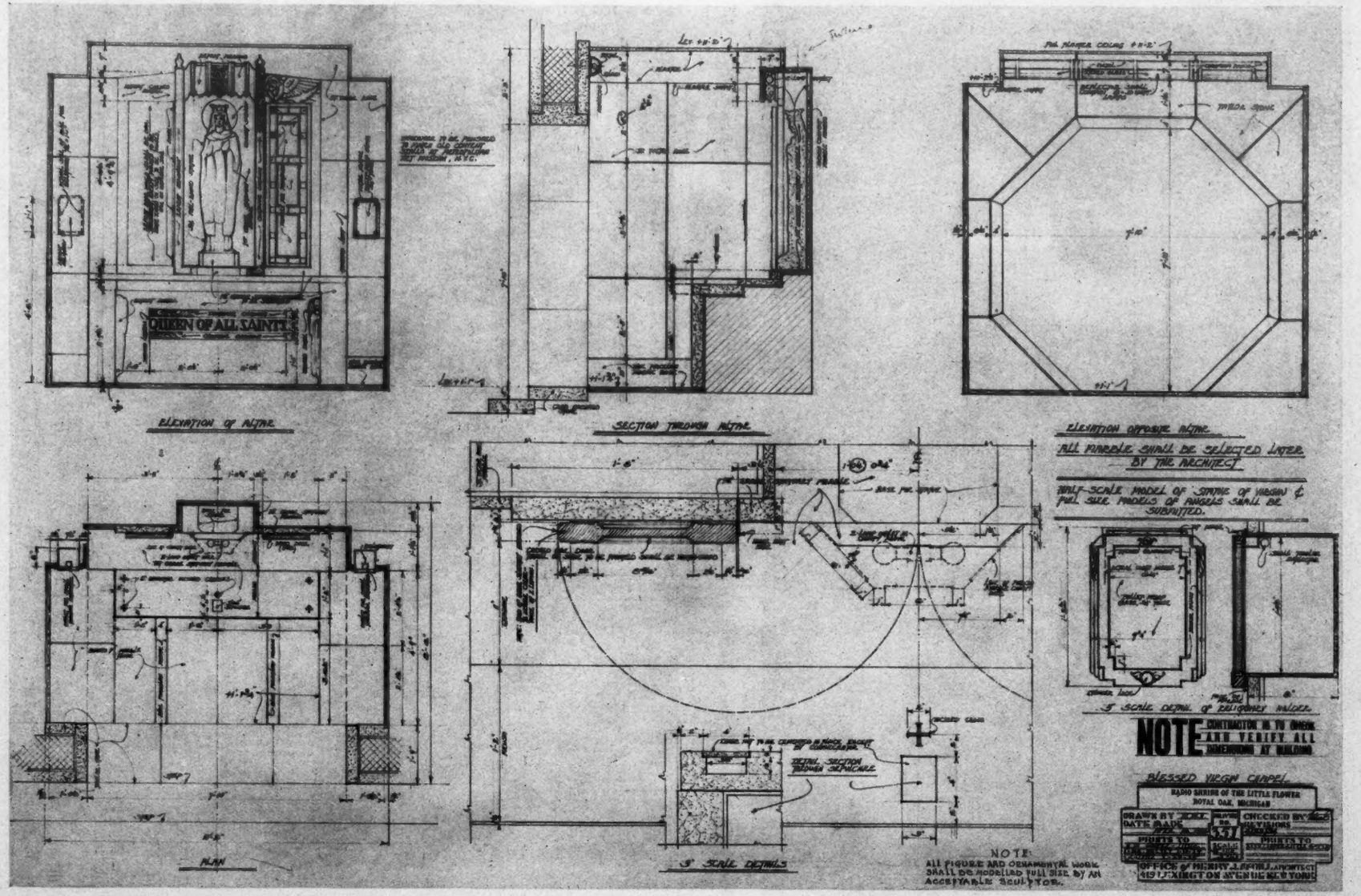
Diagonal Section, Front Elevation, Diagonal Elevation, Charity Crucifixion Tower, Radio Shrine of The Little Flower, Royal Oak, Michigan. Office of Henry J. McGill, Architect



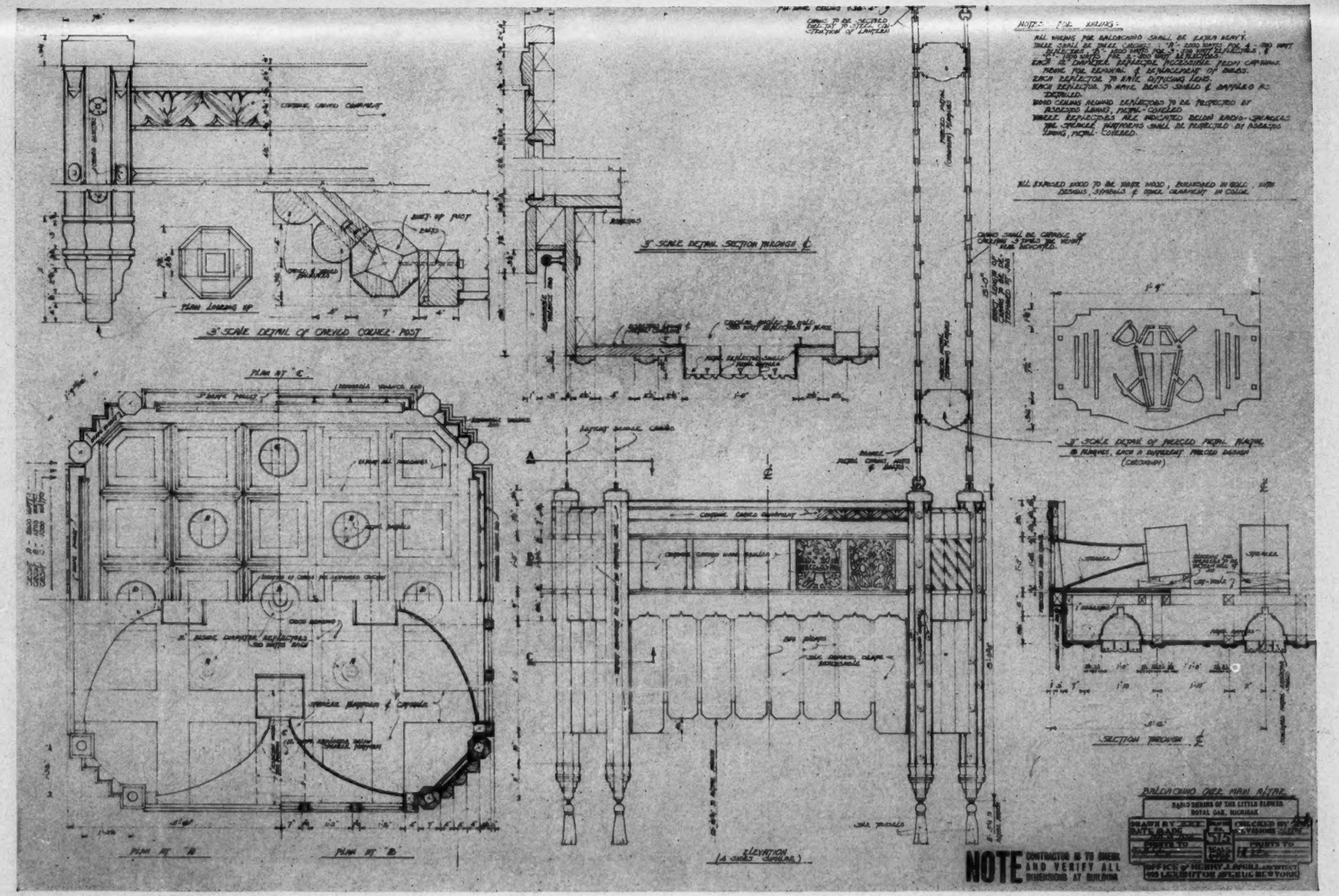
The Rectory for the Shrine will adjoin the Church at the Northeast as shown by the plan on page 472



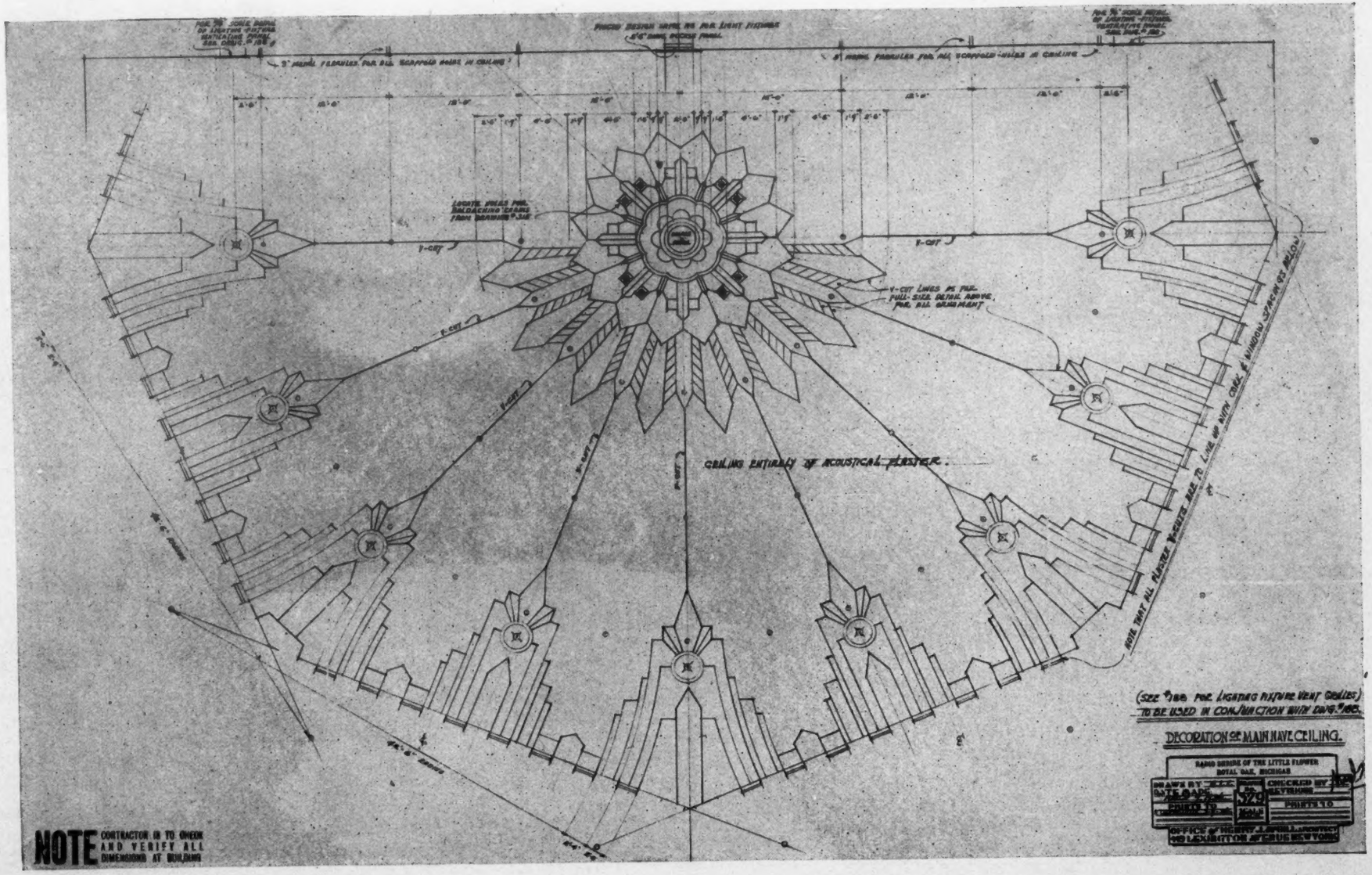
Preliminary Landscape Layout, Radio Shrine of The Little Flower, Royal Oak, Michigan. Reverend Charles E. Coughlin, Pastor *Office of Henry J. McGill, Architect*


QUEEN OF ALL SAINTS
ELEVATION OF ALTAR
SECTION THROUGH ALTAR
PLAN
3" SCALE DETAILS
ELEVATION OPPOSITE ALTAR
ALL MARBLE SHALL BE SELECTED LATER BY THE ARCHITECT
HALF-SCALE MODEL OF STATUE OF VIRGIN & FULL SIZE MODELS OF ANGELS SHALL BE SUBMITTED.
3" SCALE DETAIL OF TRIFORIUM ARCH.
NOTE
BLESSED VIRGIN CHAPEL
RADIO SHRINE OF THE LITTLE FLOWER
ROYAL OAK, MICHIGAN
NOTE
ALL FIGURE AND ORNAMENTAL WORK SHALL BE MODELLED FULL SIZE BY AN ACCEPTABLE SCULPTOR.

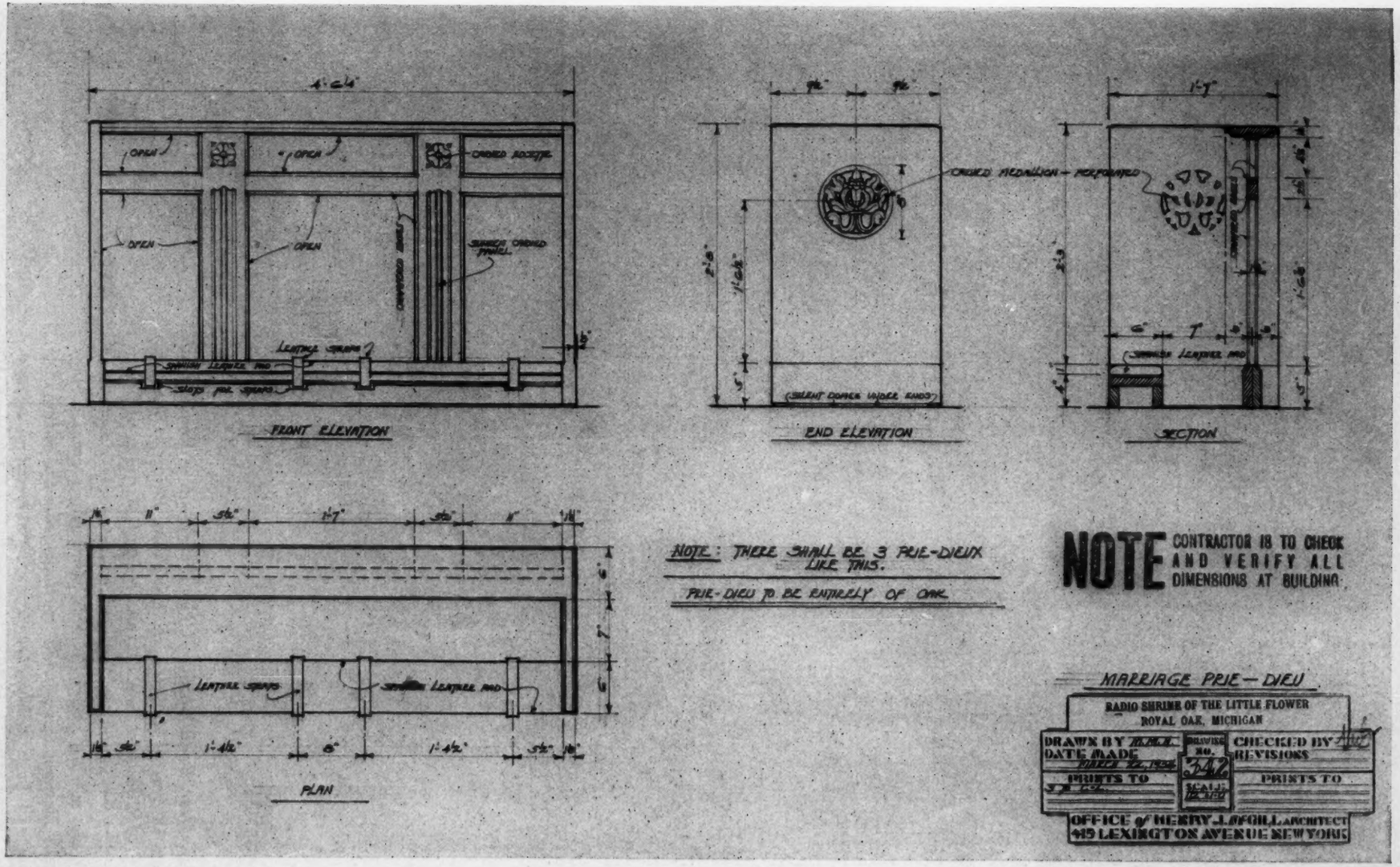
Blessed Virgin Chapel, Radio Shrine of The Little Flower. Reverend Charles E. Coughlin, Pastor. Office of Henry J. McGill, Architect


3" SCALE DETAIL OF CARVED COLUMN-POST
3" SCALE DETAIL SECTION THROUGH ℄
PLAN AT "C"
PLAN AT "B"
PLAN AT "D"
ELEVATION
SECTION THROUGH ℄
3" SCALE DETAIL OF PIERCED METAL PLAQUE
NOTE
BALDACCHINO OVER MAIN ALTAR
RADIO SHRINE OF THE LITTLE FLOWER
ROYAL OAK, MICHIGAN
OFFICE OF HENRY J. McGILL, ARCHITECT

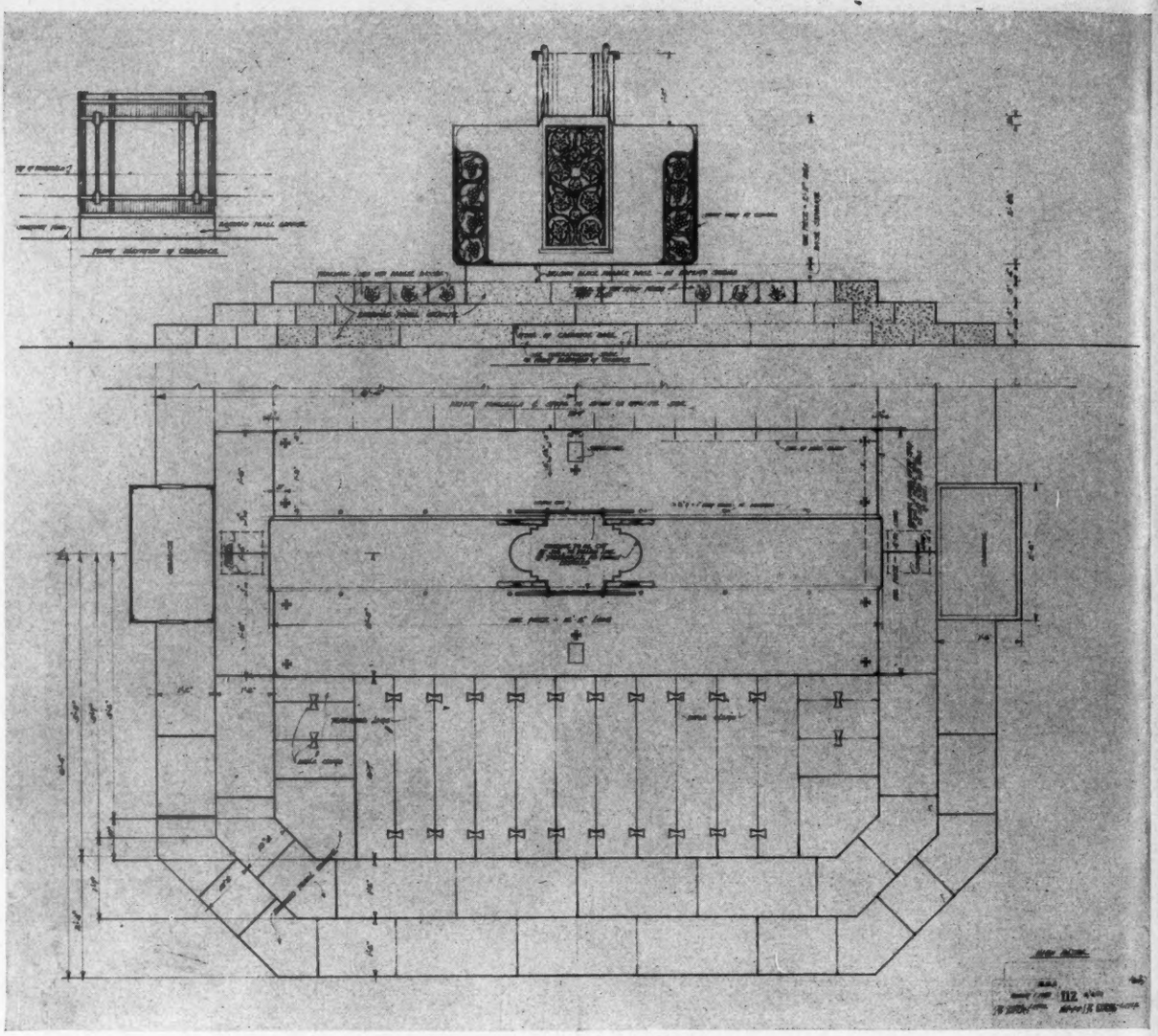
Baldacchino over Main Altar, Radio Shrine of The Little Flower. Reverend Charles E. Coughlin, Pastor. Office of Henry J. McGill, Architect


CEILING ENTIRELY OF ACOUSTICAL PLASTER.
DECORATION OF MAIN NAVE CEILING.
NOTE CONTRACTOR IS TO CHECK AND VERIFY ALL DIMENSIONS AT BUILDING

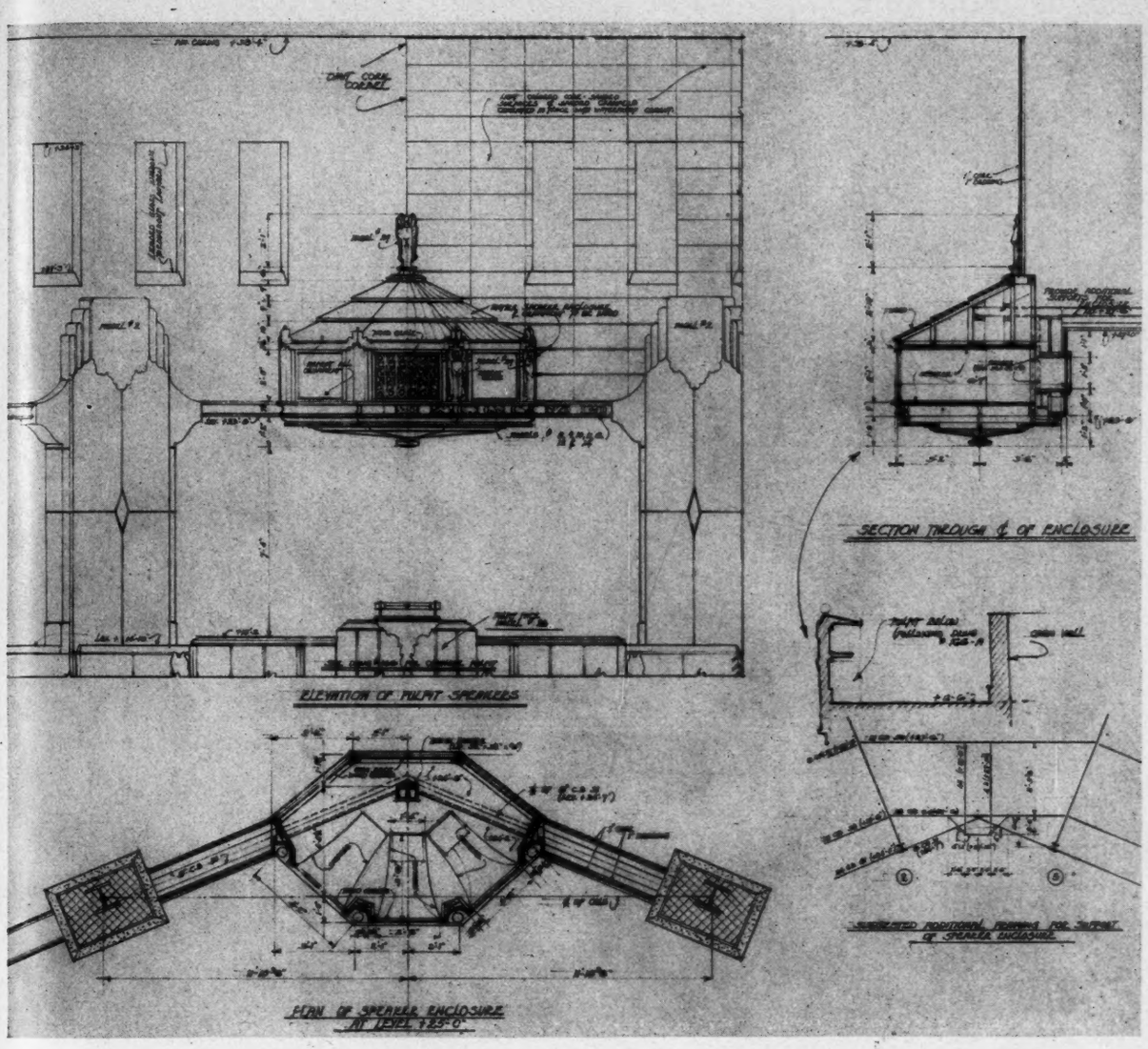
Decoration of Main Nave Ceiling, Radio Shrine of The Little Flower. Reverend Charles E. Coughlin, Pastor. Office of Henry J. McGill, Architect



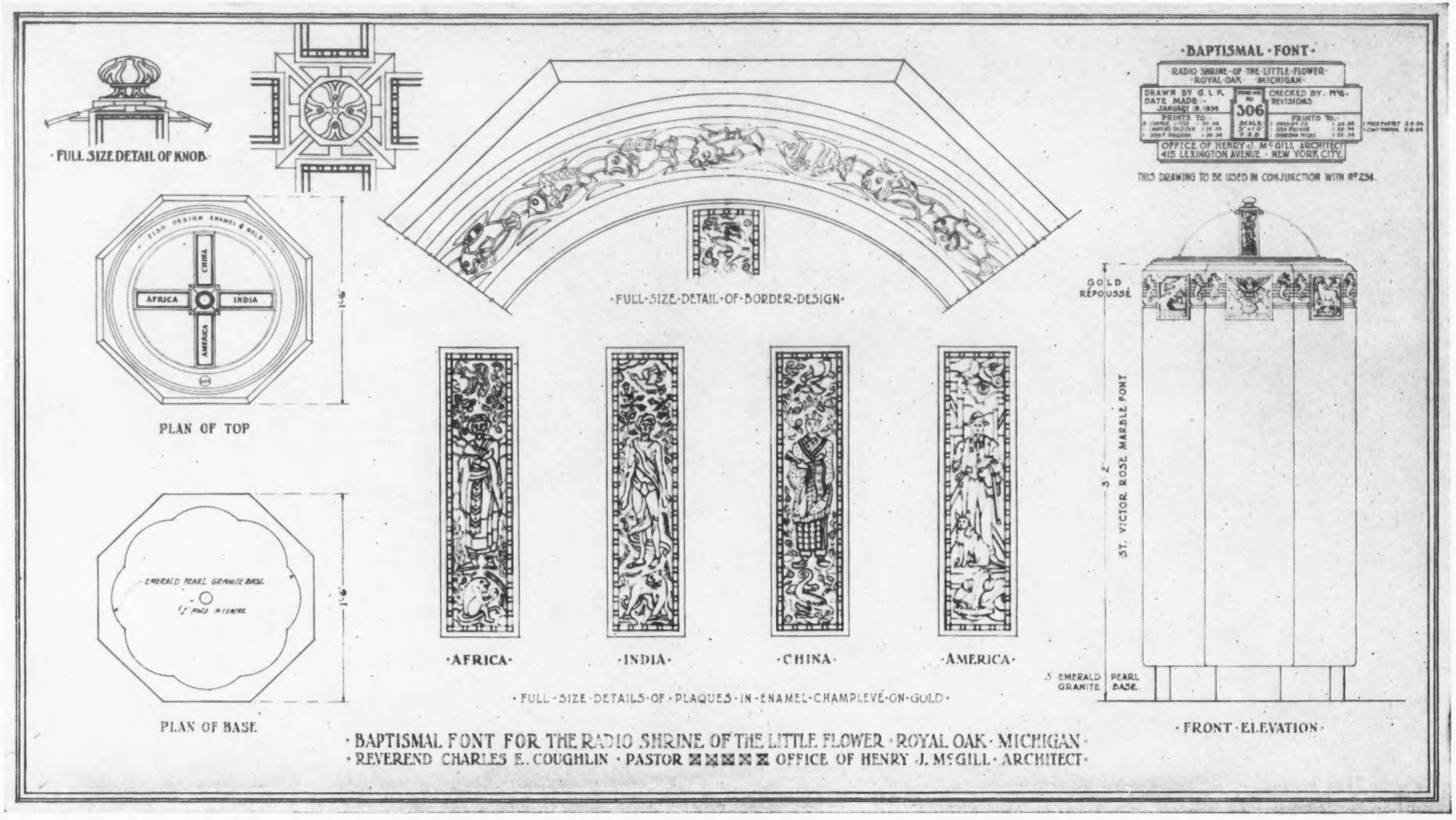
Marriage Prie-Dieu, Radio Shrine of The Little Flower, Royal Oak. Reverend Charles E. Coughlin, Pastor. Office of Henry J. McGill, Architect



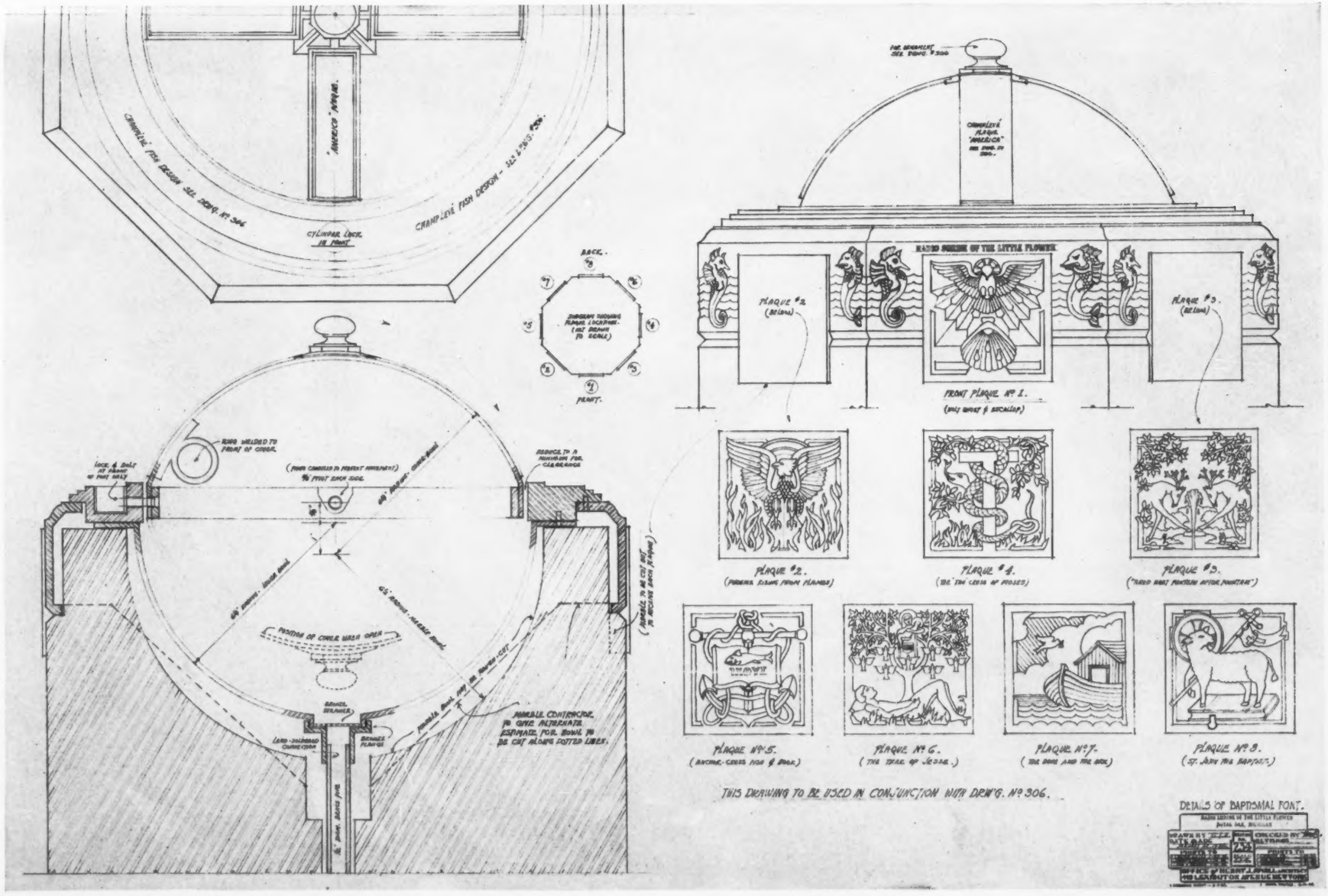
The High Altar, Radio Shrine of The Little Flower, Royal Oak, Michigan. Reverend Charles E. Coughlin, Pastor. Office of Henry J. McGill, Architect. On an elevated platform of heavy walnut timbers joined by exposed white maple dovetails is the Carrara marble altar. Emerald-pearl black granite steps lead to the platform. Suspended by chains from the ceiling over the altar will be a richly carved wood baldacchino in polychrome and gold. Damask drapes are to be used. *See page 469*



Main Pulpit Speaker Enclosure, Radio Shrine of The Little Flower, Royal Oak, Michigan. Reverend Charles E. Coughlin, Pastor. Office of Henry J. McGill, Architect. The pulpit will be at the front of the Balcony on the main axis, to the east of the high altar and directly over the opening into the Chapel of the Blessed Sacrament. The entire speaker enclosure and ornament are to be of wood richly ornamented with carved grilles through which the sound will radiate into the auditorium



Plans, Elevation and Full Size Details of the Baptismal Font for the Radio Shrine of The Little Flower, Royal Oak, Michigan. Reverend Charles E. Coughlin, Pastor. Office of Henry J. McGill, Architect. This drawing and the one on the page below state the various materials which are to be used and show in detail the construction of the hemispherical cover of the Font with the details of the ornamental Plaques and Border design

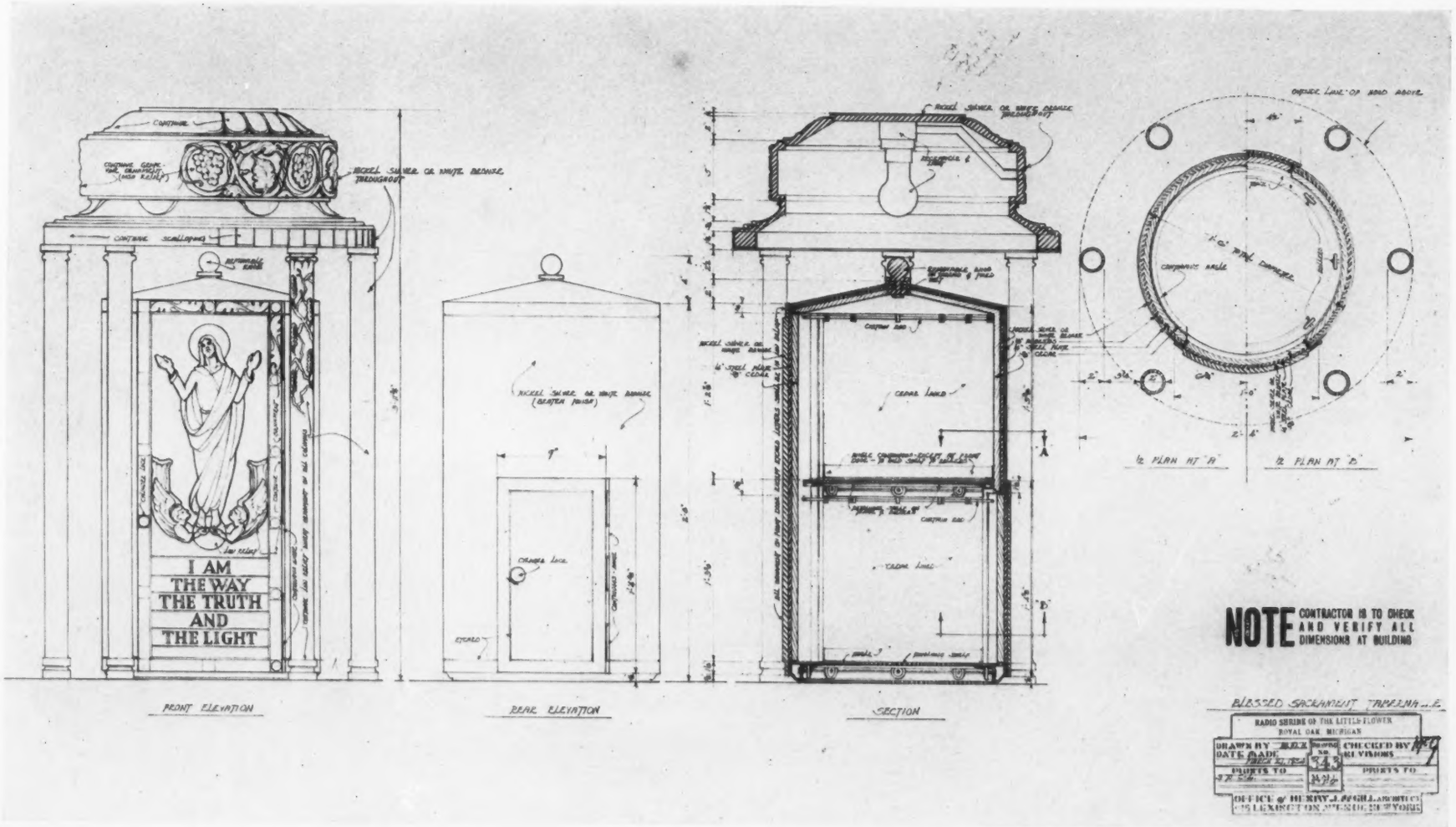

CHAMPLEVÉ FISH DESIGN SEE DRWG. Nº 306
"AMERICA" PLAQUE.
CYLINDER LOCK IN FRONT
CHAMPLEVÉ FISH DESIGN - SEE DRWG. Nº 306
BACK.
FRONT.
RING WELDED TO FRONT OF COVER.
LOCK & BOLT AT REAR OF FONT ONLY
REDUCED TO A MINIMUM FOR CLEARANCE
PASSION OF CHRIST WORK OPEN
REMOVABLE CONCRETE TO GIVE ALTERNATE ESPHALTIC FOR BOWL TO BE CUT ALONG DOTTED LINES.
RADIO SHRINE OF THE LITTLE FLOWER
PLAQUE Nº 2. (BELOW)
PLAQUE Nº 3. (BELOW)
FRONT PLAQUE Nº 1.
PLAQUE Nº 2.
PLAQUE Nº 4.
PLAQUE Nº 3.
PLAQUE Nº 5.
PLAQUE Nº 6.
PLAQUE Nº 7.
PLAQUE Nº 8.
THIS DRAWING TO BE USED IN CONJUNCTION WITH DRW'G. Nº 306.
DETAILS OF BAPTISMAL FONT.

Details of the Baptismal Font, Radio Shrine of The Little Flower. Reverend Charles E. Coughlin, Pastor. Office of Henry J. McGill, Architect

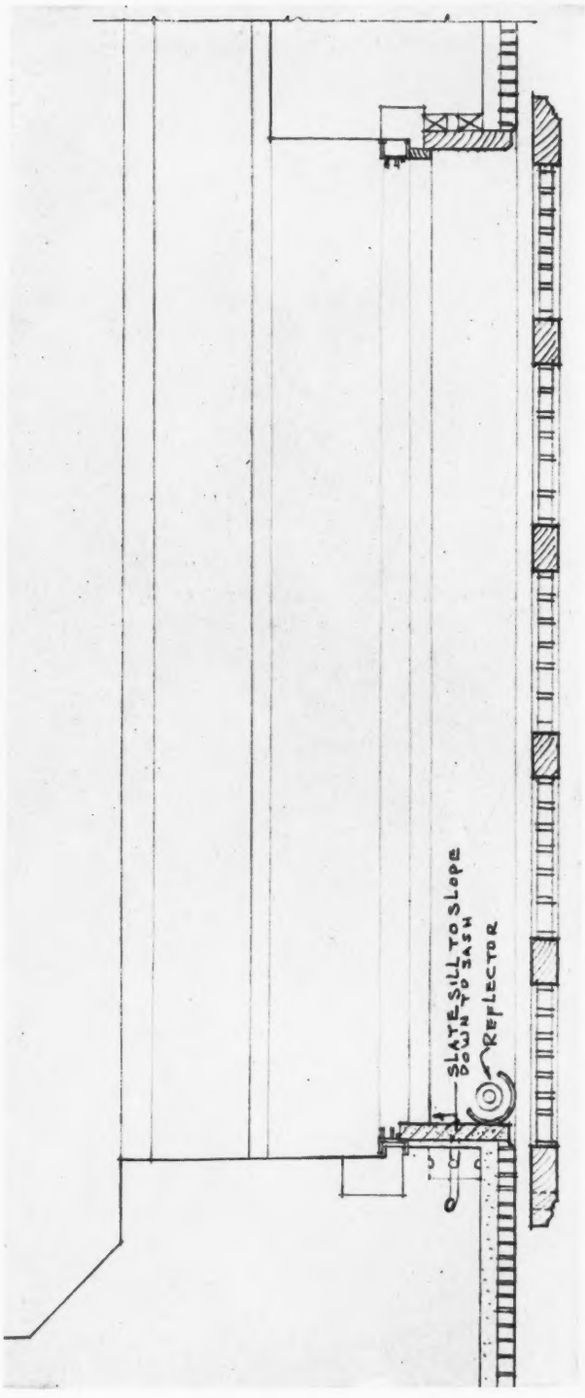
EXCEPT YOU EAT THE FLESH OF THE SON OF MAN AND DRINK HIS BLOOD YOU SHALL NOT HAVE LIFE IN YOU ❧ HE THAT EATETH MY FLESH AND DRINKETH MY BLOOD HATH EVERLASTING LIFE AND I WILL RAISE HIM UP IN THE LAST DAY ❧ FOR MY FLESH IS MEAT INDEED AND MY BLOOD IS DRINK INDEED: ❧ HE THAT EATETH MY FLESH AND DRINKETH MY BLOOD ABIDETH IN ME AND I IN HIM ❧

MOSES GAVE YOU NOT BREAD FROM HEAVEN BUT MY FATHER GIVETH YOU THE TRUE BREAD FROM HEAVEN ❧ FOR THE BREAD OF GOD IS THAT WHICH COMETH DOWN FROM HEAVEN AND GIVETH LIFE TO THE WORLD ❧ LORD GIVE US ALWAYS THIS BREAD ❧ I AM THE BREAD OF LIFE: HE THAT COMETH TO ME SHALL NOT HUNGER AND HE THAT BELIEVETH IN ME SHALL NEVER THIRST ❧

Inscription for Tabernacle Doors, Radio Shrine of The Little Flower. Reverend Charles E. Coughlin, Pastor. Office of Henry J. McGill, Architect



The Blessed Sacrament Tabernacle, Radio Shrine of The Little Flower. Rev. Charles E. Coughlin, Pastor. Office of Henry J. McGill, Architect



Ornamental bronze grilles placed inside of glass around lantern, Radio Shrine of The Little Flower, Royal Oak, Michigan. Reverend Charles E. Coughlin, Pastor. Office of Henry J. McGill, Architect

THE UPPER GROUND

Being Essays in Criticism

By H. VAN BUREN MAGONIGLE
D. ARCH., F. A. I. A.

"'Take the upper ground in manœuvrin', Terence,' I sez, 'an' you'll be a gin'ral yet,' sez I. An' wid that I wint up to the flat mud roof av the house and looked over the par'pet, threadin' delicate."

R. K. "My Lord the Elephant."

A LETTER ABOUT MODERNISM AND A REPLY

"Dear Mr. Magonigle:

"We have been shouting hearty 'Amens!' to your PENCIL POINTS exhortations and deriving sound benefit from your criticisms. But you are letting us down by not preserving your critical attitude when approaching the 'modern' (or what you will).

"Irving W. Morrow's letter to the Editor published in the May issue of PENCIL POINTS is a very just indictment of your failure in this respect.

"Surely all the 'moderns' are not insincere charlatans and all their efforts are not devoid of one single commendable achievement."

Sincerely yours,

(*Sgd.*) JOHN MANGRUM,
President of Evansville Architectural Draftsmen's Chowder and Marching Club.

* * * *

This letter has gone long unanswered, dated as it is May 16th, 1935. I can only plead preoccupation with other subjects and the decision of the Publisher to discontinue publication of most of the mass of letters received in response to utterances in this department. But Mr. Mangrum's letter does not deal with the foibles and failures of the profession at large, particularly as represented by the Institute; it refers directly to the shortcomings of the writer in criticism and especially to his strictures upon the so-called "modern." So that it comes under the purview of this department and deserves an answer in which I shall try to clarify my point of view—one shared, I may say, by many others.

This answer is not to be construed as in any sense an apology for that point of view—to which, whether as citizen or critic, I hope I may claim, without offense, to be entitled.

In the past fifty-four years I have seen a number of schools rise and pass including the *Art Nouveau* which was only another way of saying "modernistic"; but the authors of the work done in their name bore criticism with fortitude and even good humor. This latest of the schools, however, seems to be troubled with a sensitiveness approaching the touchy. A case in point is the Morrow episode to which Mr. Mangrum refers. There was published in a western magazine a view of a house by Morrow and Morrow with a caption saying that the garage was placed on the roof in compliance with the client's "highly detailed program of requirements." I scanned the photograph with great care but it failed to reveal the existence of any upper road by which the car could enter or leave the garage, and said in comment: "There is no explanation or evidence given as to why the 'rigorous solution' of the . . program demanded that the car should be kept on the roof. But this is probably one of the 'new ways of living'" (a quotation from some statement in the same number explaining one of the other "modern" abodes published). "Does it fly off or jump down? Or is it just to have and to hold?"

I thought at the time that this was a rather harmless little joke but it seems not.

Although Mr. Morrow in his letter to the Editor of PENCIL POINTS specifically disclaimed being "thin-skinned under criticism" he permitted himself some very ill-mannered and unpardonable expressions, such as my "willingness to stoop to any means to make a point" and "Mr. Magonigle's willingness to descend to dishonest methods to make a point." These are not quoted as exhibiting Mr. Morrow's failure in amenity, but as illustrative of the type of reaction of the "modernist" to any but laudatory comment on his work. This is not the only letter I could quote from, written by practitioners of that cult, which display fury in differing degrees in highly personal attacks upon my intelligence, honesty, and narrow-minded, reactionary attitude toward "any idea which has emerged since his (my) school days."

Well, I do not propose, at this late date, to defend my record as a progressive. And as to my intelligence, even honesty, I gladly let these gentlemen have their last word. I could have, with an equal equanimity, made my critique of the Morrow illustration and the accompanying "descriptive caption" (explanation of their work seems a necessity to them) more impersonal by omitting the name of the author. Perhaps that will be a good policy to pursue in the future. Criticism should be as impersonal as possible—as lacking in personalities as the reactions to such criticism might be.

* * * *

This letter of Mr. Mangrum's and the episode referred to give me the cue for a statement of my view of the function of the critic at a time when the principles and standards of rational design are

being challenged by so many, here and abroad.

I respect and admire progressive design which neither rejects structural and æsthetic standards, nor stupidly plagiarizes the work of the living or the dead.

I like very few modernistic designs because most of them do both.

I find them devoid of that precious quality, personality. I think many of them and their explanatory blurbs ridiculous. And when I see students in the schools, and men of maturer minds who ought to know better, accepting this new gospel of apparently perverse and deliberate ugliness for the sake of being "new" or "original," I am moved to use the weapon best suited to combat what I consider a pernicious tendency—and that weapon is ridicule. For most of it should be laughed to death.

I deem it the duty of a critic to tell the truth as he sees it, even though in so doing he may hurt someone's feelings. The pussy-footer has no place in criticism. We may remember that the function of the critic is to draw attention to the merits or defects of the work he examines, to watch current trends and oppose or support them as they appeal to his judgment or not. It is his province to stimulate the thought of the reader and if that thought be adverse to the critic's opinion, well and good. The critic has done this job. The reader rejects or accepts. The reader is left free to agree or disagree with the critic—but the duty of the critic is not affected thereby. It is his province also to compare what he has under review with the best that has been thought and done in the world, always within the limitations of his culture.

* * * *

I do not think, as Mr. Mangrum expresses it, that "all the 'moderns' are insincere charlatans and all their efforts devoid of one single commendatory achievement." But I do think they have, so far, failed to achieve anything remarkable, and that they are guilty of extreme silliness very often. To read the explanations which inevitably accompany the illustrations of their work, one would be led to think that they are Columbuses discovering new continents in design and construction and the use of materials; even "highly detailed programs of requirements" are referred to as though such programs are something quite new and extraordinary; most of them must be very young, for they lay great stress on such matters; experienced practitioners long since learned to regard them with a sense of proportion.

But they are not discovering new lands—most of them are merely cribbing from the work of men in Germany, Austria, Holland, and France, and to a limited extent from Sweden. The American exponents of the cult offer nothing new. They seem to believe that if they build a rectangular box without a visible roof, stick a pipe rail or two here or there, and run the windows of a corner room around the corner with no visible support for the weight above, they have achieved an "original," "functional," and commendable result. One has only to run through some of the foreign periodicals once a month as I, for my sins, have to do, to see that the familiar vice of the profession, plagiarism, is just as rife as ever and has merely chosen another field for exploitation.

* * * *

A short time ago, for a lecture, I collected a half-dozen examples of exactly the same modernistic motif, done in Stuttgart, Düsseldorf, Berlin, London, and New York. The whole series speaks the language of the parrot. Cover the captions and it is impossible to tell where any one of them had been built. And it is from such sources the "modernist" seems to draw his "inspiration."

* * * *

The "moderns," or the "modernists" (it seems there is a subtle difference claimed by divisions of the school not perceptible to any but the initiate), announce that their work is based on "logical" grounds — "rigorous solutions" — that they are guided by considerations of "function"; and, to judge from the results of their devotion to these excellent principles, they let beauty and charm and gracious living go down the wind. In most of the house plans I have examined, there seems to be as much possibility of a decent privacy in daily life in them as for the goldfish in its bowl. The rooms "flow" into each other or leak or ooze out into terraces or "sun-parlors." They nearly all provide an excess of light that must be hell to live in day by day, and this feature is emphasized whether the house or building be in a climate that demands a lot of light or lots of protection from light. If they would be logical let them study the ways excessive light and heat are handled in southern countries where the maximum of air is provided for with the maximum of protection against heat and glare, and with provision for all the light inside that is needed when the day is dull.

Logic would suggest blinds to keep the sun off the overweening areas of glass so characteristic of these designs. It is merely commonsense to keep the sun from beating upon glazed areas. We old-fashioned reactionaries do this because it is commonsense, if not logic, to recognize facts of physics. To depend upon inside curtains may be "a new way of living" but it doesn't seem a sensible or a comfortable way.

* * * *

Upon the harsh forms and ugly, unrelated masses so evident in this work, the haphazard fenestration which looks as though the building had not been subjected to a study which would reconcile the amount of light required in a given interior space to the very real, but now apparently outmoded, demands of beauty, balance, and charm of composition, I have already made comment in

these columns from time to time, unnecessary to repeat here.

* * * *

Logic is a very fine working tool, but it argues a certain mental or spiritual indolence to go no further and be satisfied with only that. To stop there indicates also an insensitiveness to the charm and grace that should inform a composition. Logic is only one of the forces to invoke for the solution of a problem. Logic appears to be chiefly responsible for the dreary and repellent ranges of tenements published so often from foreign sources. To compel human beings, presumably furnished with souls, to dwell in such depressing, soul-deadening barracks is no less than a crime against humanity. If these be the spawn of logic, give me plain death —it is preferable to death-in-life.

* * * *

I have seen a large number of photographs of buildings in this modern ultra logical spirit, built in beautiful countrysides in Austria, Germany, and England; and their harshness, their nakedness, are in shocking contrast to the beauty of their settings. They can never take on the mellowness, the *gemüthlichkeit* of the older things that have charmed thousands of travelers through many generations. *Apropos*, one day I was looking over an exhibition of gardens and came across a lovely composition of growing things; in one corner was a structure consisting of what looked like two Lally columns supporting a thin slab of concrete —so starkly ugly, so completely out of harmony with the gracious beauty of the garden that I couldn't suppress an exclamation — "Hell," or something. Further down the room was an exceptionally well-trained man who has forsaken "tradition" for the modernistic; he came to where I was and I said, forgetting this, "Look at this little horror in this beautiful spot!" He replied, "Ah, there speaks the old reactionary. I think it is very charming." "Charming!" Good God! Well, I shut up; what was the use. But there you have it. Judgment and a sense of the appropriate seem to be held in abeyance once the modernistic bug gets a good bite. The birthright of architecture is sold for a mess of steel and concrete and those who oppose the sale are to be called reactionary.

* * * *

Pat to the occasion I find in *Architecture* for August, just received, a house the name of whose author I carefully refrain from printing. It is one of the series of One Hundred Small Houses and I reproduce it here. It is accompanied by the following wingéd words: "All the houses which I was privileged to detail were happy work to me. Still this mountain house gladdened my heart beyond the rule, because it offered proof that it may take but moderate means to fulfill even peculiarly interesting requirements." Look carefully and dispassionately at this house; ask yourself whether its lines and masses and texture have any relation to

House in California From August *Architecture*

the rocky slope upon which it does not even seem to maintain itself; or is it a mere excrescence which could gladden the heart of no one with any sense of taste or fitness except those committed to a barren building formula, regardless of those qualities.

One of the "peculiarly interesting requirements" of any building is that it should be in harmony with the site and its conditions. Is this? So far as I can see it follows the same modernistic formulæ

The News Building, New York. John M. Howells, Raymond Hood Associated, Architects Nov., 1930, *Architectural Forum*

RCA Building, Rockefeller Centre. Reinhard and Hofmeister; Corbett, Harrison and MacMurray; Hood and Fouilhoux, Architects From December, 1933, *The Architectural Record*

dear to this school whether the site be level and suave, or, as here, rugged and steeply sloping. This specimen alone would be ample ground for my distaste for their work.

* * * *

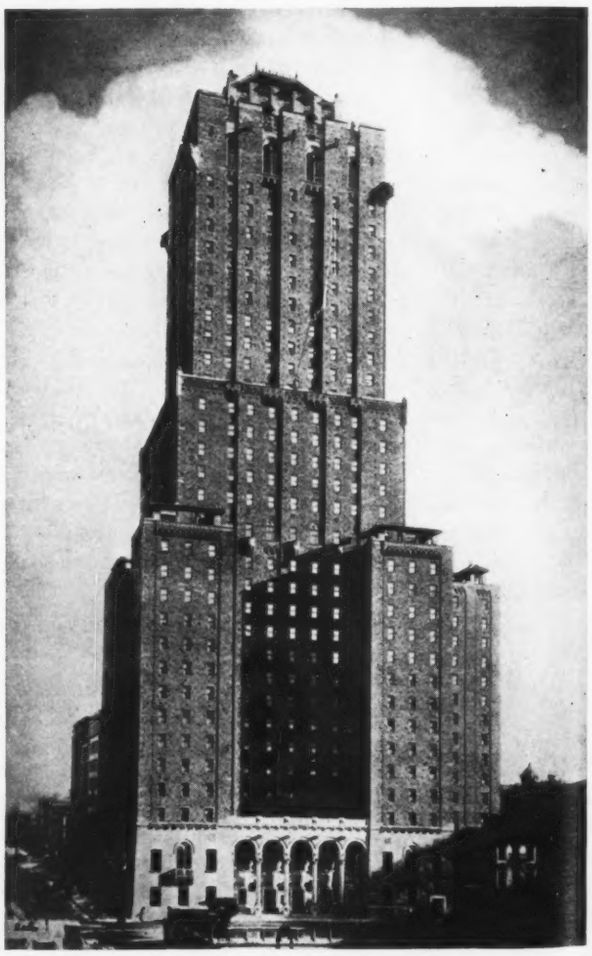
In the business-building field are other different but equally distasteful practices. It seems to me that an architectural composition, no matter how simple, should be complete in itself, have a defining treatment at the top which says: "This building finishes here; it is going no higher; we do not intend to build any more stories on it."

Look at the Daily News Building in New York and Rockefeller Centre published herewith. Neither of them terminates. You could cut them down, either of them, five or ten or more stories and never miss them. The window slots go right on up and out into space. The same treatment is given much lower buildings, of two or three stories, as anyone may verify by looking over the illustrations in the magazines.

This insistence on the vertical and the avoidance of horizontal shadows is akin to a musical composition in F which repeats that note and no other —as Whistler once pointed out. Even in the Gothic cathedrals, where the whole composition aspires strongly, we find many strong horizontals which do not interrupt the upward flight of the buttresses and pinnacles, but which do furnish the minor contrast of another movement which makes them well-balanced and satisfactory compositions.

* * * *

Nor is there any attempt to give a sense of weight and thickness by the treatment of the reveals. Buildings of this type look like structures of cardboard. In Rockefeller Centre the meanness of the reveals and other means of modeling the buildings are especially noticeable. I don't know what the window reveals are in inches—it isn't much, and it doesn't matter, for such dimensions are proportionate and relative: I know it looks mean and meagre. On certain pavilions, of one of the buildings, on the side street, is some "sculpture." Passing over its utter lack of any sound sculptural principle, its complete absence of balance or rhythm, its complete absence of relation to the building, and concentrating only upon the relation of its projection to the depth of the reveals, there is no relation to be found. It just sticks out in great gobs. If the architects, obsessed by the "logic" of a



The Shelton Hotel, New York. Arthur Loomis Harmon, Architect From "*Masterpieces of Architecture in the United States*"

twelve-inch screen wall to enclose the buildings, denied them any shadow or modeling where it could have so easily been obtained, one wonders why then they permitted the sculptor to give his figures the high relief they have instead of a flat relief that would have some relation to the window reveals.

* * * *

Thousands gape at these buildings every day. Rockefeller Centre having been one of the largest and most advertised of the "modern" manifestations, they are probably, for the uninstructed laity, the very latest and best thing. One could wish that they are also the very last. I hold that an architect has a moral duty to the art he professes to follow and should not permit himself the silly and unbridled performances to be found everywhere in this group; he should consider their effect upon an innocent public, not to say the art he debases—an effect which leads to steady deterioration of public taste, and, given the name of Rockefeller, which connotes the command of the very best to be had, sets a stamp of approval upon such stuff which is pernicious and misleading.

* * * *

If anyone is interested enough to see an exquisite study in relative projections and reveals, I would direct his attention to the old building of the house of Scribner on Fifth Avenue just below 22nd Street, designed by Mr. Ernest Flagg. I think it is one of his earlier works done not long after he returned from Paris while he retained the strong impression Neo-Grec detail made upon so many men of that day. But question of "style" apart, the building is a triumph of judgment and skill and taste and study in the handling of the relations between window reveals, projection of pavilions and pilasters, and other modulations of the surface, including cornices and string courses. Each is exactly right in proportion to all the others. I suppose a modernist would call it old hat. Before he does that let him pause to compare his own "creations" with it and learn from it what really sensitive design is. Although, of course, sensitive design is old hat too. So long as a building can be touted as "new" and shock or puzzle the beholder, all objectives are attained and the hired publicity man is provided with snappy copy.

* * * *

He or they might also take a look at Arthur Loomis Harmon's Shelton Hotel, which was awarded the Gold Medal of the Architectural League when it was first completed, and deservedly. It is still one of the best tall buildings in the country. And it is so because it exemplifies so many of the permanent virtues of good architecture and yet strikes a fresh note. A steel frame with the usual thin wall of course, Mr. Harmon gave it a sense of solidity and real weight and mass by a number of devices which anyone who studies it without prejudice must agree are valid. How "logical" they may appear to some is a question; but that they possess the unanswerable logic of beauty cannot be doubted. They seemed to me when I first saw them perfectly reasonable and legitimate. Something ought to be done to a tall building to avoid the effect of a cardboard model, and Mr. Harmon did it. His devices are not of the type of those of the Chanin Building, for instance, where a flimsy cardboard shaft is topped out with huge buttresses that buttress nothing and are utterly out of relation with the mean window reveals below them and completely indefensible as structure.

* * * *

I believe there to be a sincere attempt in most of the "modern" work to attain simplicity. But simplicity is not paucity of imagination—it is restraint in the exercise of imagination. It does not reside necessarily in the omission of "ornament" nor in the absence of the light and shade which models the building. True simplicity is not the fruit of logic; it is the child of taste and measure.

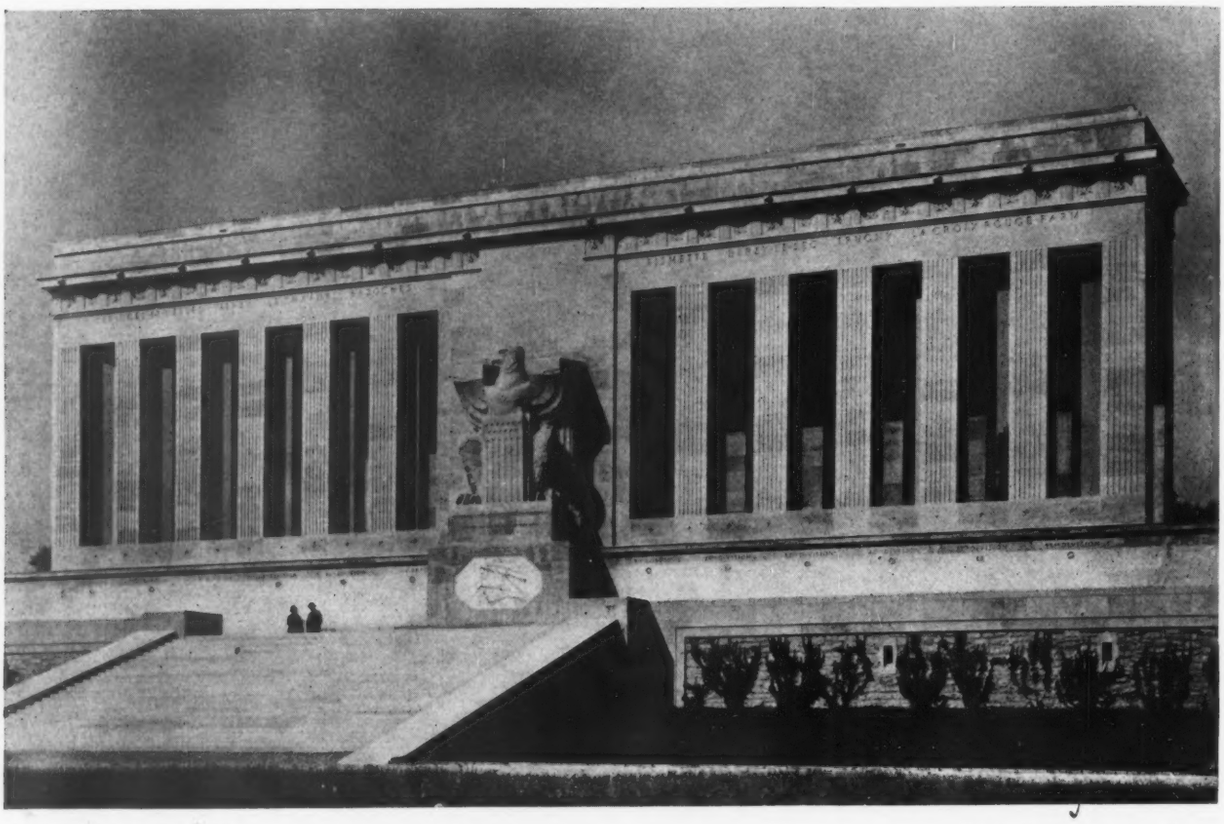
Taste changes from epoch to epoch, but the best things, the things which survive, all possess it. The taste of the Golden Age of Greece is very different from that of the eighteenth century—but they both have traits in common.

Taste, in the artist, is that selective judgment which combines the elements of design into a beautiful whole. It may be broadly stated that in periods when taste is narrow and exclusive it is usually at low ebb, and when it is broad and catholic and inclusive of all that is best it is at high tide. Our own epoch—by which I do not mean the ten years from 1925 to 1935 but the past twenty-five or thirty years—should be notable for its selective judgment for we are dowered with a vast mass of information culled from centuries of culture. If our time is lacking in taste we cannot claim that we err in ignorance.

Taste is possible to anyone who will take the trouble to acquire it by constant, thoughtful study of what, by the test of time and the concensus of opinion of the most cultured judges, are considered the masterpieces of all the great epochs of artistic history.

* * * *

No great art ever developed by the rejection of the canons of design to be found in the best work of preceding generations. It is a sufficiently trite observation to say that no enduring structure can be raised without firm foundations. Yet that is precisely the fundamental error of the "modern" cult. One has but to survey the history of architecture to see at a glance that the art has developed slowly and inevitably from what has gone before. Each "style" has grown out of the preceding "style" as it was subjected to the many and intricate influences of race, personality, climate, place, and available building materials. A new art cannot be created out of nothing, by merely taking



American Battle Monument, Chateau Thierry, France — *Paul P. Cret, Architect*

Washington Heating Plant, Washington, D. C. — *Paul P. Cret, Architect*

thought; but it can be developed by gradual modification of older forms—a process of inevitable but slowly working laws repugnant to impatient temperaments or to the opportunist.

How then, in the face of such overwhelming evidence as human history provides, can this group expect to produce great or even good architecture by fiat?

* * * *

Let me say a few words about the current obsession with the "abstract" in those grace notes in architectural composition we may group under the general head of "ornament."

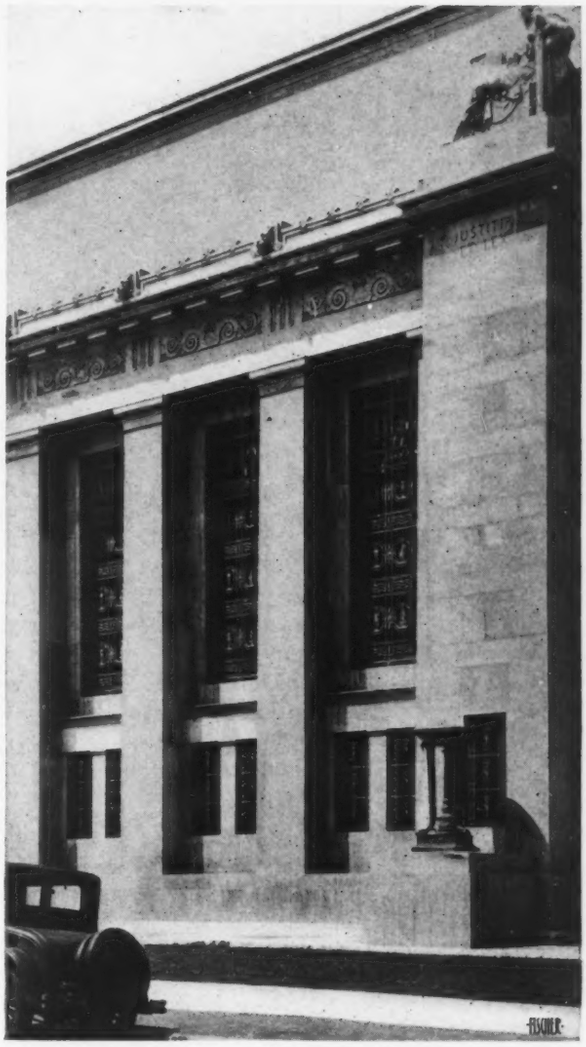
Turning again to the lessons of history, consider for a moment the edict of Mohammed against the use of living forms, animal or vegetable, and its effect upon ornament in Mohammedan work. Denied those fields by religious prohibition, the Mohammedan artist did not abjure ornament but had recourse to geometrical forms and pattern. The result was sterility, and Moslem ornament therefore had no influence to speak of upon succeeding work in Christian lands.

We have been, and to a certain extent still are, afflicted with a rash of chevron-like forms combined or not with others apparently derived from pressed ferns, blown up to huge size, curling upon themselves. There is a band of this stuff, a whole story high, on the Chanin Building in New York, which, for lack of scale, lack of beauty, lack of taste, lack of life, it would be hard to beat. These forms were not invented here; they were plagiarized from France, just as the cartouches and the corbels cribbed from Modern French Renaissance buildings were applied to American buildings.

* * * *

Let us turn from theory to example for confirmation of our thesis that it is not necessary to reject the canons of sound architecture in order to create something fresh.

Through the courtesy of Dr. Paul Phillipe Cret I am enabled to present some of his beautiful and progressive work. It requires neither comment nor analysis from me. It speaks for itself, in the old language, with a new accent. But I may go so far as to point out that there is nothing meagre about it but that it is rich in light and shade beautifully disposed. And it is along such lines that I believe we may look for sound and rational progress in American architecture.



Hartford County Court House, Hartford, Conn. Paul P. Cret, Architect *Photograph by Sigurd Fischer*

Just as we go to press, word arrives of the sudden death of Mr. Magonigle on August 29 at Vergennes, Vermont, where he was visiting friends. It is with deep sorrow that we make the announcement. He was a man, loved by his friends, respected by his adversaries. The profession of architecture has lost a rare spirit, one who has ever striven with all his might to uphold its highest ideals.

WASHINGTON MONTHLY LETTER

By CHESTER M. WRIGHT

INSURANCE of mortgage bonds will be the next major stimulus to low-cost housing on the part of the Federal Housing Administration. It will be part of the Administration's new determination to utilize the home-building urge of the American people in a major recovery program directed at building construction. New programs, new projects, new methods are being worked over and will be announced within sixty days.

There was nothing in the National Housing Act to prevent the FHA from insuring mortgage bonds on low-cost housing projects. There were, however, a number of difficulties and obstacles in other laws. Action by this Congress on banking and bankruptcy laws cleared the way for action by the FHA. A definite scheme will be announced very shortly.

PROFITS. So successful have been the manufacturers of building supplies and materials cooperating with the FHA, that their sales and profits reports constitute an amazing recovery, in many cases a phenomenal transition from red to black. First quarter earnings this year of 22 companies reporting to the FHA are $9,861,839, compared to earnings in 1934 of only $947,046. This is an increase in profits of 941 per cent. Sales increases between January and July are in one case 712 per cent, another 350 per cent, another 344 per cent, many at 200 per cent and 100 per cent, with most of them running between 25 and 50 per cent in increased sales.

WORKS PROGRESS. Criticism of the Administration's spending policies falls into two classifications. One group says the government is spending money too rapidly; the other says the funds are not being disbursed rapidly enough to stimulate recovery and relieve the unemployment situation. Without taking sides, it seems pertinent to give the facts as of August 24.

To date $2,794,717,052 of expenditure has been approved out of the $4,800,000,000 appropriated by Congress. The biggest single classification is that of Federal projects—War, Navy, Veterans, and other federal agencies, housing and resettlement—totaling $1,314,563,937. That covers 1,123 projects of the 5,105 which have been filed, and since only 570 of these have been denied, there is plenty of opportunity to spend more money within this classification.

Detailed information about approved housing projects is not available because the PWA has adopted the policy that secrecy will be maintained until the real estate deals involved have been closed. Too many housing projects have been killed because of boosting of land values to such a point that low-cost housing became high-cost housing. But deals are being closed rapidly and the sum will eventually run into big figures.

State administered projects are eventually going to mean considerable spending, but so far only $325,315,394 has been approved.

Out of the $200 million highways and $200 million crossings appropriations, $386,237,803 has already been earmarked. The $100 million for statutory roads is another item to be added to the total.

Projects totaling $27,997,918 have already been approved out of the National Youth Administration's appropriation of $50,000,000, which seems to dispose of more than half of the question of how that money would be spent. The NYA is having difficulties cooperating with other departments of government which have been caring for the youth of the country, especially along educational lines, but it is fairly well settled now that most of the money will be spent for educational purposes.

The funds disbursed for direct relief are gradually being reduced; the funds approved for this purpose now total $640,000,000.

Administration expense accounts for more of the total, such as the allotment of $600,000 to the Treasury.

WPA STRIKE. The New York City strike of building craftsmen against the "security wage" is not settled permanently. There will be rumblings from labor for some time to come, perhaps more than mere rumblings, because of what lies back of the front line trenches.

The prevailing attitude of employers toward labor in the building industry is that lower wages are essential to a building revival. Observers combine this attitude with the tendency of the Administration during the NRA era to increase minimum wages and reduce the wages of skilled labor. From these two attitudes they deduce that the "security wage" idea was part of a general plan which will further the efforts of private employers to reduce the labor cost of construction.

Labor in the building trades has seen the same picture. The strike came in New York because that was the first place that the WPA got going and the first place labor men could protest. They point out that the WPA wage regulations involve large reductions in the total pay of unskilled labor

and reductions in the hourly rate of skilled labor. They insist that they have fought for generations to lift the skilled rate to a decent level and that their wage scales should not be cut but wages in other industries brought up to their levels.

Compromises are coming. The prevailing wage is paid on PWA projects. Unions say the PWA agreement is being circumvented by splitting up large projects into smaller ones of less than $25,000 each, thus putting them in WPA's jurisdiction. PWA Administrator Ickes believes union labor to be efficient, more efficient at the prevailing wage than non-union labor generally at lower wages. So there are two viewpoints within the Administration itself, one working for the prevailing wage and the other for the "security" wage. The President's expressed views in favor of a guaranteed annual wage point toward a maintenance of the "security" wage during a period long enough to permit experiments looking toward more general adoption by industry of the guaranteed annual wage idea.

LOWER INTEREST RATES. Discussion in Administration circles of lower interest rates for housing purposes continues and is slowly having an effect in lowering rates. Recent surveys by the Federal Home Loan Bank Board indicate that the majority of investors today are more interested in safety than in extreme liquidity or a high dividend rate. In the past building and loan associations depended largely upon the high dividend attraction. They are now shifting to "the more attractive attribute of safety, based upon the insurance of share accounts made available by the Federal Savings and Loan Insurance Corporation," says an article in the Federal Home Loan Bank Review. One of the largest savings and loan associations in Ohio reduced its dividend rate to 3½ per cent following the receipt of its insurance certificate. Average rates have been running from 4½ to 5 per cent. In spite of the decrease, the safety provided by share insurance resulted in an almost daily increase in share purchases."

Mutual savings and loan associations are now paying from 2 to 3 per cent on savings. The FHLBB believes that federally insured savings and loan associations should attract ample funds at 3 to 4 per cent dividend rates in most sections of the country.

CONSTRUCTION REVIVAL. Public works and utilities activities ended July with the largest volume of contracts for any month this year. Contracts in 37 states totaled over $53.9 millions, which was 38 per cent better than either June, 1935, or July, 1934.

Apparently people all over the country are cheered up over future prospects and are putting on the paint. Paint sales in the first half of 1935 were 15 per cent above 1934, 59 per cent over 1933. Much of this is modernization stimulus from the FHA, but a very large part is due to the fact that residential awards for the first six months were ahead of the full total for 1934! Seven months rolled up a volume of $256.5 millions, a 69 per cent gain over the same period of last year.

Another index of the trend comes from the FHA, which reports a $53,797,335 volume of business during July, an increase of 250 per cent over March.

The Bureau of Labor Statistics of the U. S. Department of Labor reports: "Compared with the corresponding month of last year the estimated cost of the buildings for which permits were issued in July shows an increase of more than 60 per cent." The greatest improvement is reported in residential construction—three times greater than July of last year.

RAISING HOUSE STANDARDS. There is a challenge to the architectural profession in the open letter from Miles L. Colean, technical director of the Federal Housing Administration, to the Committee on Housing of the American Institute of Architects. R. H. Shreve, chairman of the Committee, in presenting the facts in the July issue of *The Octagon* says that "it challenges the profession to make good its assertion of the right of the private professional to be employed as against the organization of a government service," and "it points to a need for service in a field to which the commercial agent has given more attention than has the architect."

Architects have done little, according to Mr. Colean, to influence local housing standards. As a result typically local types of buildings have evolved in certain cities largely by accident and have been copied and generally adopted as acceptable house construction. Some of these forms are not especially fitted to the life of the community in which they happen to exist. Some are decidedly freakish.

"Without some positive force being brought to bear, the prospect of improvement in the character of this housing, which comprises the shelter of a substantial proportion of the population, is slight," says Mr. Colean, "and, due to the ingrained habits of developers and builders and to the sentiments of owners and occupants, resistance to change is extremely strong."

The architectural profession constitutes the force to make the change and "it is possible of development as a source of remunerative endeavor."

Widespread changes in professional techniques and practices must be adopted in order to make architects effective in the field of small structures in small communities, says Mr. Colean. "The magnitude of this field provides opportunity for millions of dollars in fees which the architectural profession through its neglect has lost to itself,

just as the community has lost the values arising from sound, economical, comfortable dwellings."

The basis for approaching the problem to the advantage of the architect lies in the FHA requirement of adequate drawings, specifications and other documents for a commitment to insure a mortgage for new construction. "The provision of these documents is very important, and time spent in publicizing their essential value should result in a greater appreciation of their value and the value of the services of the architect."

BORROWING FROM UNCLE SAM. How much of a loss will the Federal government be forced to take on money loaned or credit insured to rescue home owners or to help them build or modernize their homes? We are now beginning to get some actual facts. They tend to prove the same old story, that the American people generally pay their bills, that the exceptions are few and can be measured in fractions of one per cent, that lack of income has forced more farmers and home owners to give up their properties during the depression than ordinarily but that rising values and increased incomes are changing that picture rapidly, and that on the whole the Federal government's work in saving the country's credit structure deserves much praise and merits little criticism.

When the Home Owners' Loan Corporation announced this month that $2,727,000 worth of loans had not proved gilt edged, it seemed like a lot of money. But because the HOLC has put out that much money on poor risks does not mean that it has lost it. The appraised value of the property is much more. Sales may return enough to avoid loss.

Even supposing that the HOLC were to give this property to the poor or to Andrew Mellon, it would amount to only one-tenth of one per cent of the total loans to date, which are $2,693,547,209. Foreclosures could eventually amount to ten times or even a hundred times what they are now without causing economists much worry, and the home-saving program would still be a success.

Let nobody mistake the fact that foreclosures are as inevitable under government mortgage operations as under private operations. There may be more foreclosures under HOLC operations because its terms were more liberal and many owners may decide to throw their properties into the government's lap rather than to continue paying on debts which may seem greater than the properties' value to them. But the government will not permit an individual to forget an obligation. The transaction will be carried to a conclusion somehow.

So far only one of every 981 borrowers has defaulted on his payments to such an extent that foreclosure has been necessary. One out of every 2,623 borrowers has been "wilfully delinquent." That is to say, 340 out of the 909 foreclosures are the outcome of deliberate refusal on the part of the borrower to make payments when his ability to make such payments was clearly established.

Under the operations of the Federal Housing Administration, character loans are proving fine risks. Up to August 3 the FHA had settled only 164 claims, totaling $68,983, for modernization credit, or six cents for every $100 of insured loans by banks for alteration and repair of homes. Credit operations under the FHA are not direct loans but insurance of loans made by banks and mortgage institutions.

FHA insured mortgages on homes and new construction of homes has not been in effect long enough to justify foreclosures. The FHA did not reach its stride in Title II until March of this year. Mortgages accepted for insurance up to August 3 number 13,535 and total $56,472,345 in value. Mortgages selected for appraisal and with fees paid number 32,147 and total $126,741,631 in value. Pains were taken to make only gilt-edged loans in the early cases so that considerable time will probably elapse before foreclosure proceedings will affect FHA operations under Title II.

Uncle Sam's farm mortgage credit burden has been considerable for some time. It goes back to 1917, when the Federal Land Banks were established. The Farm Credit Administration did a major rescue job in 1933, but the situation has improved materially since, so that now optimistic reports are in order. The FCA is now principally engaged in developing a complete unified system of credit institutions on a permanent basis to provide farmers and farmers' organizations with credit adapted to their particular requirements.

On May 31, 1935, the total amount of mortgage loans outstanding was $1,988,228,428.34, and after deducting matured principal unpaid, in the amount of $5,936,400.73, was $1,982,292,027.61. On $1,555,546,616.59 of these mortgage loans all matured installments were paid. That's a mark of 77.7 per cent, which is not so bad considering farm conditions during past years. There were 140,113 loans of the total 627,344, valued at $442,-681,811.75, which were delinquent. This does not mean that they will be delinquent permanently. Farm incomes and farm values have increased. Fewer farms are being abandoned.

But delinquency is not the final measure of the extent to which Uncle Sam will be holding the bag. The final measure will be the real estate eventually held. On May 31 the FCA had $71,601,-941.70 tied up, with another $15 million in process of being tied up. This is a little over 4 per cent of the mortgage loans outstanding. It does not represent loss. In fact the Banks have been very successful this year in their disposal of real estate acquired through foreclosures and other means, for they sold for $11,045,083.90 real estate which they were carrying for $10,912,608.09. Uncle Sam does not want to make a profit on his mortgage business, but his losses are not going to be big enough to make any of us worry.

A. L. Guptill's Corner

A LITTLE DEPARTMENT OF ARCHITECTURAL ESTHETICS, WITH EMPHASIS ON SKETCHING AND RENDERING

HERE IT IS AT LAST, FOLKS!

Without more ado, I have the honor of presenting the following program for a new sketch competition.

GUPTILL'S CORNER SKETCH COMPETITION No. 2: SKETCHING FROM THE PHOTOGRAPH IN PEN AND INK

PROBLEM. The problem is to make an effective sketch (not rendering) in pen alone of the photographic subject published on page 490 of this issue of PENCIL POINTS. The contestant is not expected to make a slavish copy, exact in every detail, but rather to interpret the building and its surroundings as though he were actually before them, making an outdoor sketch. All the main architectural elements of the subject must be shown, and at approximately the same proportions as in the photograph: it is not enough to select a limited area, such as a doorway, and draw that. Inconsequential details can, however, be omitted or suppressed. The complete surroundings need not be drawn, and the portions included can be somewhat recomposed: trees can be made larger or smaller, or changed in position or detail; vines or bushes can be added or omitted, etc. Appropriate figures, clouds, or other accessories are permissible. Tones of light and dark throughout the entire subject can be changed as desired. Assume the light to fall from any angle.
DRAWING. A contestant can submit one or more drawings, but no contestant is eligible for more than one prize. Each drawing must be in undiluted black ink on white paper measuring exactly 11″ x 14″. Illustration board and stiff Bristol board are especially recommended. Unmounted tracing paper is not acceptable. The paper can be placed vertically or horizontally. The subject matter must be larger or smaller than in the photograph as evidence that it was not transferred. The subject can be vignetted (allowed to fade at the edges) or not. Border lines are optional, as is a lettered title. Though the drawing must be done with pen only (no brush work being permitted) there is no restriction as to make or size of pen, or method of working. Results in outline, fine line, broad line, mass shading, or combinations of any of these, will be received with equal favor.

NOM DE PLUME. No drawing is to be signed, nor is to contain any identifying mark with the exception of a *nom de plume* or device which must appear at small scale in place of the usual signature. With each drawing there must be enclosed a plain, opaque, sealed envelope containing the true name and address of the contestant, and bearing on the outside his *nom de plume.* The envelopes will not be opened until after the awards have been made.
DELIVERY. Drawings must be mailed flat, postpaid, fully protected against rolling or folding, to A. L. Guptill's Corner, PENCIL POINTS, 330 West 42nd St., New York, N. Y., in ample time to be delivered on or before October 21, 1935. Drawings will be given every reasonable care, but are at the owner's risk from the time they are sent until returned.
JUDGMENT. The drawings will be judged during the last week of October by a qualified Jury appointed by PENCIL POINTS. Judgment will be based on artistic merit. Composition and logical expression of the subject matter will have as much weight as technical excellence. Immediately the drawings are judged, the winning contestants will be notified by mail. General announcement of the results will appear in the December issue, a copy of which will be sent to every contestant.
THE PRIZE DRAWINGS. The prize drawings, and report of the Jury, will also be published in the December issue. These drawings are to become the property of the Reinhold Publishing Corporation, and the right is reserved to publish or exhibit any or all of the other drawings. The drawings of unsuccessful contestants will be returned, postpaid, within a reasonable time.

PRIZES, PRIZES AND PRIZES!

PRIZES. There are no cash prizes. All prizes are in the form of PENCIL POINTS Books, selected from the list printed on page 68, Advertising Section, of this issue. Sixty-five dollars' worth of books will be given in all, as follows:—First Prize, $25; Second Prize, $15; Third Prize, $10; three Fourth Prizes, $5 each. These books will be sent postpaid as soon as selected by the winning contestants. Mentions (honorary) may be awarded at the option of the jury.

THERE'S NOT MUCH ROOM LEFT

It took so much space to tell you all about that competiton that there's not much left this month for anything else. But the enthusiastic way in which Competition No. 1 was received indicates that No. 2 will, in itself, prove sufficient to interest most of you. I've been getting quite a number of letters asking when it was coming.

I'M TRYING TO CATCH UP WITH ALL MY CORRESPONDENCE!

Which reminds me to tell you that hard as I try to keep up with my correspondence, I'm still hopelessly behind. But I appreciate your letters just the same. When this appears in print I'll doubtless be back at the old desk again, and will try to answer each letter individually.

My mail has brought a few bully suggestions. One calls for a competition for the rendering from photograph of a typical tree or group of trees of a type which would lend themselves to incorporation in architectural renderings. What think ye? Several want reprints of the recent rendering projects: others, of the prize and mention drawings of the Guptill's Corner Competition No. 1. How many would like these, if they could be brought out inexpensively as loose sheets or in a paper cover? The publishers are willing to do this if there seems reasonable demand. Let's have your vote if you are interested. No obligation incurred! Perhaps you would prefer to have us wait until there are additional competitions, then making a single publication.

Every so often a question bobs up which I can't answer. I have one now. Perhaps you can help me, gentle (or ungentle) reader. "I like scratchboard for pen renderings of small size to be used for newspaper publicity, but it costs quite a bit and the old wallet is 'depression compressed.' Can such board be prepared at home, and how?" Cameo paper can be scratched to fair advantage, but is usually ill-suited to pen work. Send suggestions.

Another friend asks, "Could we have dope in your department on the æsthetic employment of some of the newer building or finishing materials—plastics and the like—or on new uses for the old?" I don't see why we can't fit this in gradually, though my limited space offers a decided handicap. But let's hear from other readers. Do *you* want this in place of some of the sketching and rendering dope? Would you prefer to have PENCIL POINTS run leading articles on this sort of subject matter? Do you miss the "crits" of current material? In short, how can I make the department better?

Wentworth Mansion, Salmon Falls, N. H. Dating from 1701, this old house makes a fine subject for the pen and ink sketch competition

PENCIL POINTS DATA SHEETS

Prepared by **DON GRAF, B.S., M.Arch.**

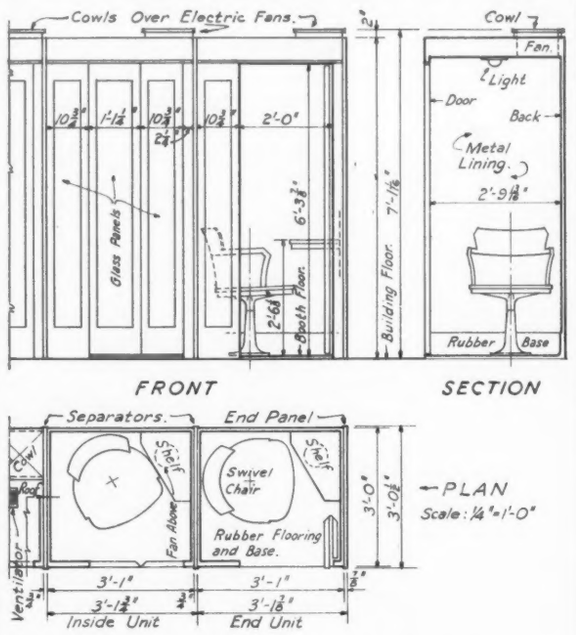
PENCIL POINTS DATA SHEETS

STANDARD TELEPHONE BOOTH NO. 7

Prepared by Don Graf, B.S., M.Arch.

Sheet No. **E3f**

Sept., 1935



This large type of booth, No. 7, is installed in locations where persons may be expected to make several successive telephone calls, thereby using the booth for a comparatively long period of time, requiring greater comfort and more space. Its use is usually confined to railway stations, hotels and such places where there is an operator in attendance.

Both the electric light and fan in each booth are controlled by an automatic door switch. The fan may also be controlled by a wall switch. Fan and light are on the house current.

Local telephone companies supply these booths in oak, light mahogany, dark mahogany and walnut in natural finish. Booths in unfinished mahogany, in other woods, or finished to match special samples for decorative purposes can be obtained from the local company.

Booths are located where the volume of calls warrants their installation. They are also supplied for regular service (i.e., not coin service) in noisy places such as factories, although the volume of calls would not ordinarily require them.

Information supplied by A. T. & T. Co.

FACTS AT YOUR FINGERTIPS

Each month since January, 1932, 4 *Data Sheets* have appeared in PENCIL POINTS. They have contained a wealth of information constantly needed in the architect's workshop. The demand for back numbers of the *Data Sheets* made it necessary to reprint them for separate sale. 7 sets of 24 *Data Sheets* per set have been reprinted. Each set represents those *Data Sheets* appearing in PENCIL POINTS during 6 months' intervals, and are all punched and ready to insert in the notebook.

More manufacturers' *Data Sheets* are coming. Watch the advertising pages for announcements during the coming months of free *Data Sheet* sets on roofing, painting, waterproofing and other subjects.

***Data Sheet* users are urged to write to Don Graf with suggestions and criticisms. The *Data Sheet* Notebook is a tool for your use, and can only be of the greatest value with the cooperation of the readers.**

Thanks should go to Mr. Fritz Kruger of New York for his contribution of an excellent portfolio of *Data Sheet* suggestions, as well as to the many others who have written letters this month.

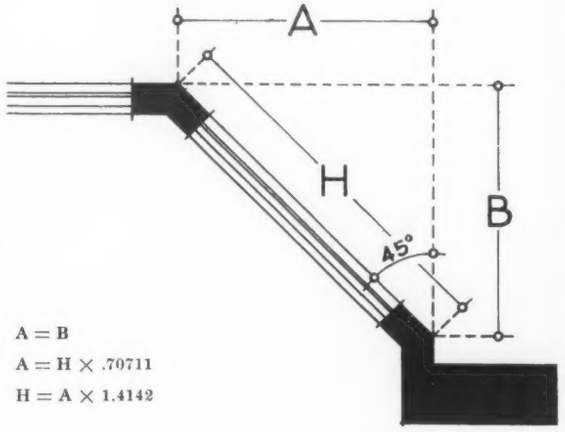
PENCIL POINTS DATA SHEETS

LENGTH OF SIDES OF 45° ANGLE BAYS

Prepared by Don Graf, B.S., M.Arch.

Sheet No. **F3i**

Sept., 1935



A = B

A = H × .70711

H = A × 1.4142

A	B	H	A	B	H
1'- 6"	× 1'- 6"	.. 2'- 1 7/16"	2'-10"	× 2'-10"	.. 4'- 0 1/16"
1'- 7"	× 1'- 7"	.. 2'- 2 7/8"	2'-11"	× 2'-11"	.. 4'- 1 1/2"
1'- 8"	× 1'- 8"	.. 2'- 4 1/4"	3'- 0"	× 3'- 0"	.. 4'- 2 15/16"
1'- 9"	× 1'- 9"	.. 2'- 5 11/16"	3'- 1"	× 3'- 1"	.. 4'- 4 5/16"
1'-10"	× 1'-10"	.. 2'- 7 1/8"	3'- 2"	× 3'- 2"	.. 4'- 5 3/4"
1'-11"	× 1'-11"	.. 2'- 8 1/2"	3'- 3"	× 3'- 3"	.. 4'- 7 1/8"
2'- 0"	× 2'- 0"	.. 2'- 9 15/16"	3'- 4"	× 3'- 4"	.. 4'- 8 9/16"
2'- 1"	× 2'- 1"	.. 2'-11 3/8"	3'- 5"	× 3'- 5"	.. 4'-10"
2'- 2"	× 2'- 2"	.. 3'- 0 3/4"	3'- 6"	× 3'- 6"	.. 4'-11 3/8"
2'- 3"	× 2'- 3"	.. 3'- 2 3/16"	3'- 7"	× 3'- 7"	.. 5'- 1 5/16"
2'- 4"	× 2'- 4"	.. 3'- 3 5/8"	3'- 8"	× 3'- 8"	.. 5'- 2 1/4"
2'- 5"	× 2'- 5"	.. 3'- 5"	3'- 9"	× 3'- 9"	.. 5'- 3 5/8"
2'- 6"	× 2'- 6"	.. 3'- 6 7/16"	3'-10"	× 3'-10"	.. 5'- 5 1/16"
2'- 7"	× 2'- 7"	.. 3'- 7 7/8"	3'-11"	× 3'-11"	.. 5'- 6 1/2"
2'- 8"	× 2'- 8"	.. 3'- 9 1/4"	4'- 0"	× 4'- 0"	.. 5'- 7 7/8"
2'- 9"	× 2'- 9"	.. 3'-10 11/16"			

PENCIL POINTS DATA SHEETS

SIZES OF SASH WEIGHTS

Prepared by Don Graf, B.S., M.Arch.

Sheet No. **F3h** Sept., 1935

IRON SASH WEIGHTS

Lbs.	*Diameter*	*Length*	*Lbs.*	*Diameter*	*Length*
2	1¼"	7"	12	1¾"	20¾"
2½	1¼"	8½"	13	1¾"	22"
3	1¼"	11"	14	1¾"	23½"
3½	1¼"	12½"	15	1¾"	25½"
4	1½"	9½"	16	1¾"	27¾"
4½	1½"	10½"	17	2"	22½"
5	1½"	11¾"	18	2"	23¾"
5½	1½"	12¾"	19	2"	25"
6	1½"	13½"	20	2"	26"
6½	1½"	15"	21	2"	27"
7	1½"	16"	22	2"	28½"
7½	1½"	17"	23	2"	30"
8	1½"	18"	24	2"	31"
8½	1½"	19"	25	2"	32"
9	1¾"	16"	26	2"	33"
9½	1¾"	16⅝"	27	2"	34¼"
10	1¾"	17¼"	28	2"	35½"
10½	1¾"	18"	29	2"	37¼"
11	1¾"	19"	30	2"	38"

WEIGHT PER FOOT OF CAST LEAD

Size	*Round*	*Square*	*Size*	*Round*	*Square*
1"	3.87	4.93	2"	15.51	19.75
1⅛"	4.90	6.25	2⅛"	17.51	22.29
1¼"	6.06	7.71	2¼"	19.63	25.00
1⅜"	7.33	9.33	2⅜"	21.80	27.80
1½"	8.72	11.11	2½"	24.24	30.86
1⅝"	10.24	13.04	2⅝"	26.72	34.02
1¾"	11.87	15.12	2¾"	29.33	37.34
1⅞"	13.63	17.36	3"	34.90	43.44

DATA SHEET NO. E3f. *On this* Data Sheet *is shown the new telephone booth No. 7. This is a large booth which has only recently been adopted by the telephone company. Only about one hundred such booths have been made. There are many large-sized booths being used today but they have been custom-built and have not heretofore been standard.*

DATA SHEET NO. F3i. *This handy chart will enable you to dimension the angles of 45-degree bays. The formula for calculating projections larger than those given on the table can be used in conjunction with the* Data Sheets *on trigonometric functions in section C1.*

DATA SHEET NO. F3h. *In detailing double-hung sash it is often desirable to keep the weight box at minimum for architectural effect. This* Data Sheet *used with* Data Sheet *No. F3g, appearing last month, will enable you to determine the size of the sash weight necessary.*

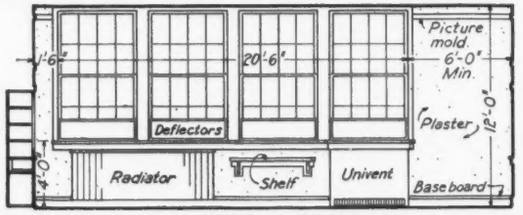
DATA SHEET NO. D14g. *Another sheet in the series on the planning of schoolrooms. These* Data Sheets *have been made possible with the cooperation of the Weber Costello Company.*

PENCIL POINTS DATA SHEETS

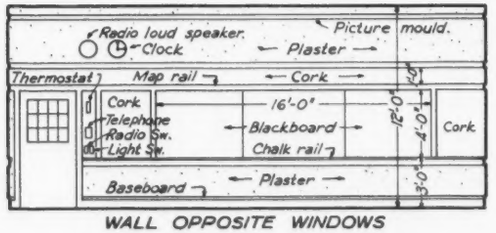
TYPICAL JUNIOR OR SENIOR HIGH SCHOOL CLASSROOM

Prepared by Don Graf, B.S., M.Arch.

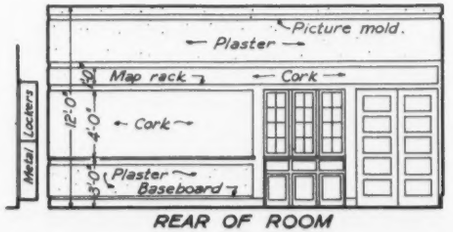
Sheet No. **D14g** Sept., 1935



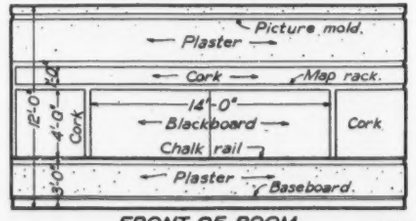
WINDOW WALL



WALL OPPOSITE WINDOWS



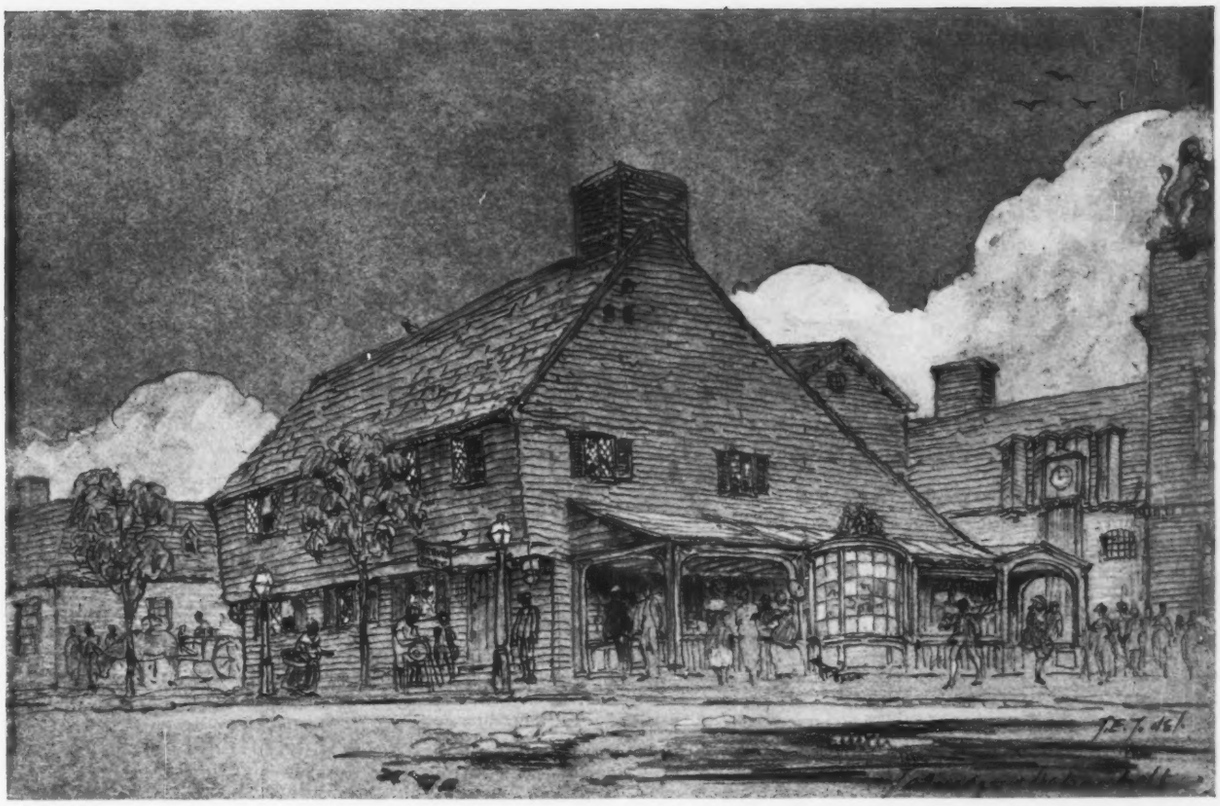
REAR OF ROOM

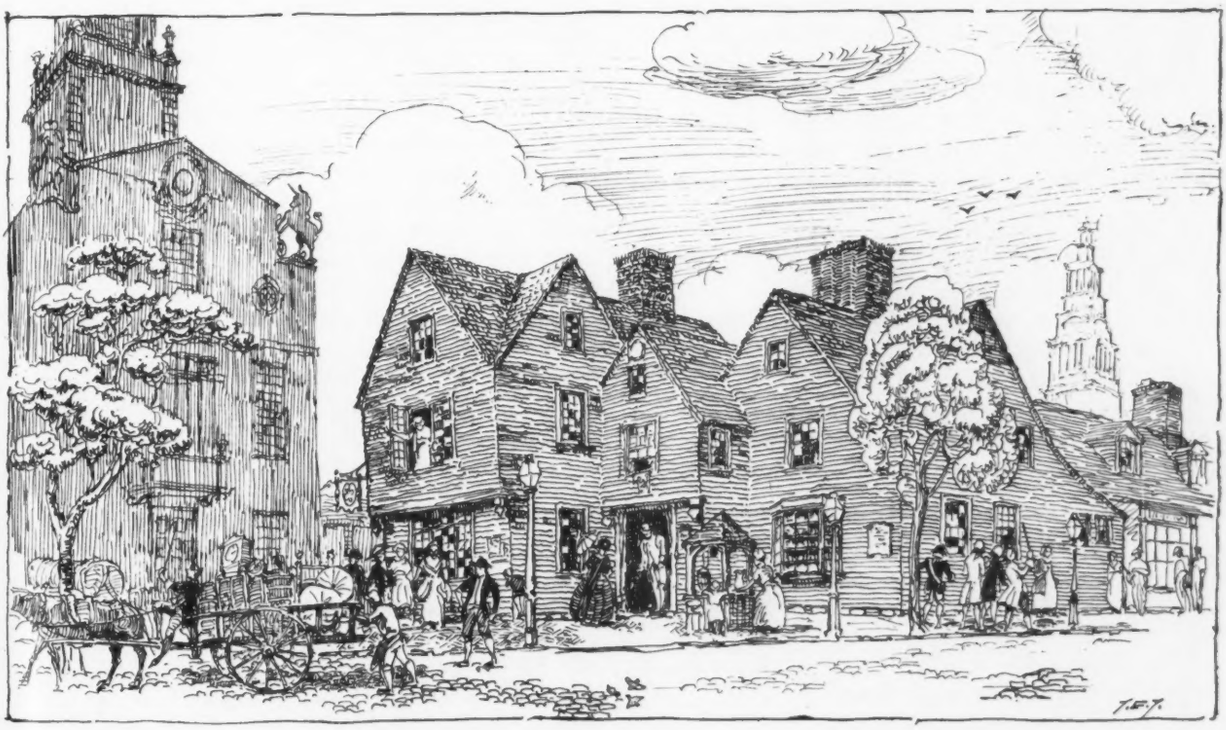


FRONT OF ROOM

Accompanying plan on Sheet No. D14f

Scale 0' 2' 4' 6' 8' 10' 12' 14





Two sketches by Thomas E. Tallmadge of buildings in the Colonial Village, Century of Progress, 1934. Above, Paul Revere's House, done in pencil and water color on gray board. Below, House of Seven Gables, in pen and ink. *Tallmadge and Watson, Architects*

BIGGER, BUSIER TRASH BASKETS

By HAROLD DRAPER VERNAM

SOME fifteen years ago or thereabouts there was a great to-do about catalogs. They were then of all sizes, from vest-pocket to steamer-trunk. Indeed, some still are. Out of the melee emerged an agreement upon two standard sizes, 6″ x 9″ and 8½″ x 11″, together with a classification scheme based upon the Dewey system, a system that is used the world over in libraries. The standardization was forced upon unwilling manufacturers and printers by architects and engineers. It is mentioned here because it shows that if the good old Spirit of '76 is aroused something can be done.

It is well known that architects and engineers have been so knocked about, tramped upon, and generally beaten to the earth of late that very little of the Spirit of '76 or of any other vintage remains to inspire them to derring-do. Yet it is noticeable that here and there an architect is sticking his head up again and presently the mighty manufacturers of building materials will begin once more to coyly woo these once revered but recently neglected arbiters of the detail and the specification, and the mails will be choked with new catalogs, etc., etc., etc. So let us then strike before the iron gets hot, form a League Against Useless Catalogs, with the slogan, "Bigger and Busier Trash Baskets!"

As someone might have written,

"Lives there a draftsman with soul so dead,
He never to himself has said,
'Here's another one of those suet-pudding concoctions, all fat without an ounce of meat in it. To the everlasting fire with it!'"

Every one of us has participated in episodes like one of the following Scenes from Everyday Life.

SCENE I

"Say, Bill, how deep is a sump?"

"What a question! How deep is a chump, you mean. Go measure yourself. A sump-chump, you are!"

"Oh, yea? Well, you're the plumbing expert around here. You tell me. I should worry."

"Sure thing; we've a catalog somewhere—"

"Oh, I've got the catalog, all right, and I knew enough about sump-pumps and sewage-ejectors, 'spite of not being a plumber, to find 'em in the catalog. Here's the one we're supposed to use. It tells everything in the world about it, except how deep a hole it requires. I guess we have a caisson built and sink it until we touch bed-rock and then everything will be hunky-dory. Of course, it gives you a depth, but not the required one. They assume you have all the space in the world, and show an imaginary sump. But what we want is the minimum."

"Golly, you're right. Oh, Miss J., will you write to these folks and ask—no, better call 'em up, if they've an office in town, and let me speak to one of their engineers. Wouldn't you think they'd know enough—etc., etc., etc."

SCENE II

Another day.

"Harry, will you get the catalog we received a couple of days ago from those Venetian blind people? I've got a pretty close fit here in this bay window and I need some dimensions."

"Sorry! It's up the flue by now, I guess. Orders are to chuck everything out that doesn't fit the A.I.A. system, and that was one of those dinky little throw-aways, so away it went. Shall I get another?"

"No, I need it too soon. I'll 'phone 'em and get them to measure how far the head of the blind sticks out. Lord preserve me from window details!"

SCENE III

Next week.

"Would you look at this? A million-dollar catalog, full of pretty pictures of the president of the company and all his ancestors, bird's-eye views of the plant and the warehouse and the Empire State Building, where they have a claim on a window or two, history of their business and how many gadgets they sold since they started, twenty-four pages of nice paper and ink, four of which, at the end where they won't annoy you if you're too busy to read that far, give a lot of dope about the stuff they sell. Let's see, if we had twenty-four filing cases full of such catalogs, we'd have four of them with information and twenty with 'hooey.' To the waste basket with 'hooey.' When I need one of these things, I'll find a poverty-stricken manufacturer who can't afford catalogs because he puts all of his money into his goods. I have to send for a salesman anyhow, if I want any facts, so it might as well be his."

What is specifically wrong with catalogs, you may ask, and what can we do about it?

Of course, no catalog is all wrong, and perhaps not even their most ardent sponsors would declare any particular catalog to be all right, so criticism must be understood to be general rather than specific. Almost all users of them, however, will agree that the following faults can readily and frequently be found.

1. They vary too much in size. If a producer wants a small folder to tuck in with every

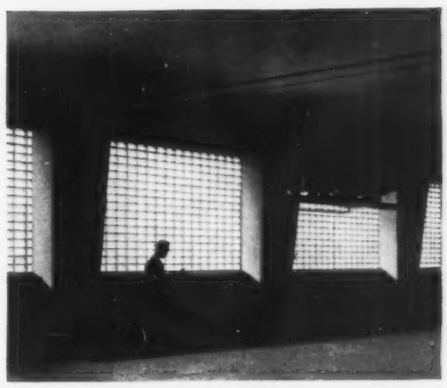
495a

September 1935

TRANSLUCENT MASONRY OF OWENS-ILLINOIS INSULUX GLASS BUILDING BLOCKS

The following pages tell the story of Glass Masonry—a product demanded by the functional and aesthetic requirements of present day buildings. Owens-Illinois Insulux Glass Masonry Blocks combine properties that are available in no other building material. The research and manufacturing facilities of the Owens-Illinois Glass Company have made possible the economical production of Glass Masonry Blocks distinguished by low heat conductivity, great structural strength and desirable light transmitting and diffusing properties.

This brochure presents a complete treatment of Glass Masonry to the architectural profession for the first time. Additional copies may be obtained upon request.



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OWENS-ILLINOIS GLASS COMPANY
INSULUX DIVISION
MUNCIE, INDIANA

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GENERAL DESCRIPTION OF INSULUX GLASS MASONRY

Owens-Illinois Insulux Glass Blocks are hollow, partially evacuated, translucent units of water-clear glass. They are laid up by masons with Portland cement mortar joints. They are suitable for functional uses as light transmitting walls of high thermal resistance; they offer a wide range of decorative possibilities. Insulux Glass Blocks possess properties and advantages unique in the field of building materials.

ECONOMY—Exclusive manufacturing developments make Insulux Translucent Masonry lower in cost than other glass masonry construction, and compares with average quality glazed steel sash.

LIGHT—Variations in the prismatic patterns impressed upon the inside faces of the blocks result in light transmitting values and diffusing properties over a wide range, with an absence of glare and light comparable to that from northerly exposed windows or skylights.

UNIFORMITY—Rigid inspection and the Owens-Illinois manufacturing process produce a block of unvarying characteristics.

STRENGTH—Insulux Glass Blocks have high compressive, lateral, impact and bond strength.

THERMAL RESISTANCE—Insulux Glass Blocks prevent infiltration losses, their heat conductivity is low, they reduce the effect of solar radiation.

SOUND TRANSMISSION—Insulux walls possess a well defined deadening effect against the transmission of sound.

FIRE RESISTANCE—Insulux Glass Masonry walls have greater fire resistance than other light-transmitting building materials.

MOISTURE—The partial vacuum of dry rarified air prevents condensation inside the blocks. No moisture appears inside Insulux walls.

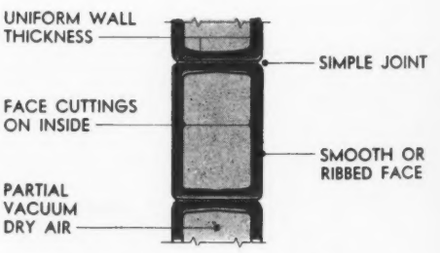
CLEANLINESS—Insulux walls are clean and easily maintained, having smooth or ribbed exterior faces.

PRACTICALITY—Experience with glass blocks has established their practical value over a period of years.

REPLACEMENT—The simple design of the mortar joint makes removal and replacement easy.

From the foregoing tabulation of characteristics it can be seen that Insulux Glass Blocks possess characteristics not found in windows, other types of masonry or in other glass building units.

Insulux Glass Blocks are light in weight and are of a size that is convenient for the mason to handle. They lay up quickly in the same manner as other masonry units.

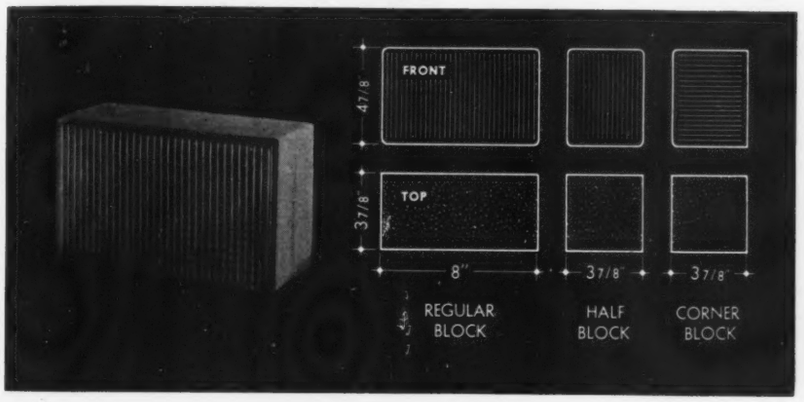


SECTION OF WALL

The Owens-Illinois Glass Company has given the building industry the Dustop Glass Wool Air Filter and Glass Insulating Wool. These products, as well as Insulux Glass Blocks, were introduced only after exhaustive research and comprehensive studies of the problems involved.

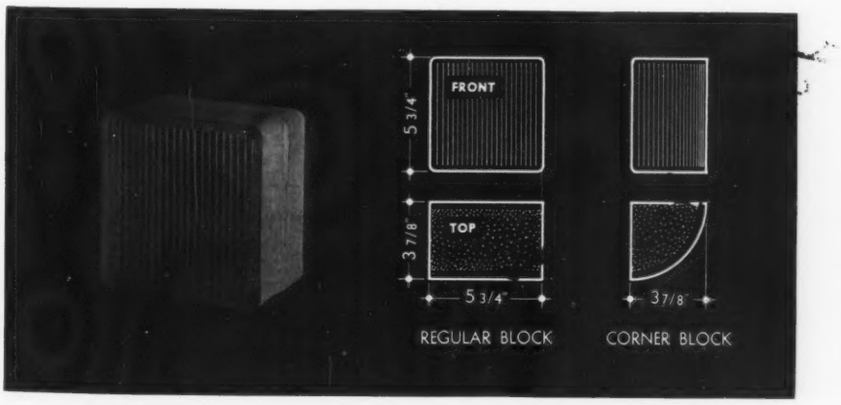
STANDARD SIZES

NO. 1 SERIES—This block bonds with 2 courses of ordinary brickwork. Square corner blocks and half blocks to be used in starting panels of Running Bond are standard.



Owens-Illinois Insulux Glass Blocks are standard in 3 sizes. The use of the standard sizes results in the most economical glass masonry construction now known to the building industry. Each of the standard sizes is available in various types of prismatic cutting, as shown on pages 4 and 5.

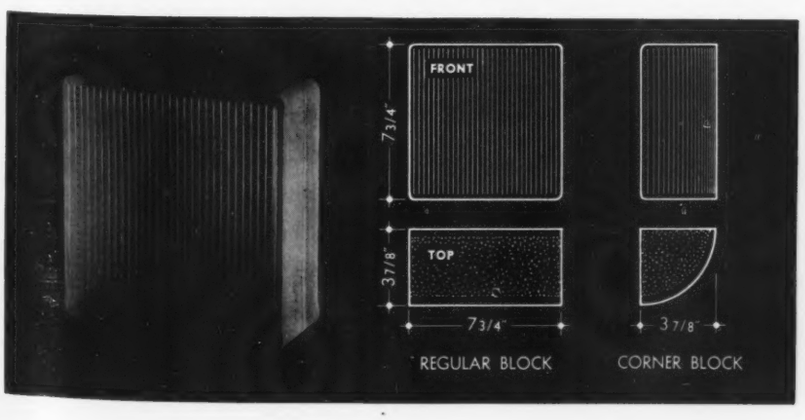
NO. 200 SERIES—This block is particularly suited to Checkerboard Bond. Rounded corner blocks are standard in this series.

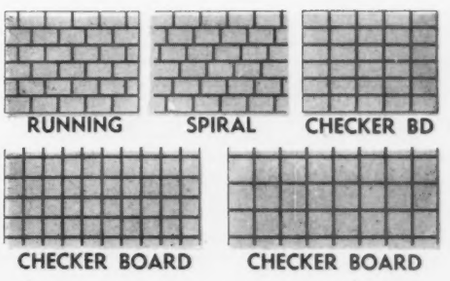


Beyond the standard sizes referred to, on special order we can furnish extra large sizes, such as 11 3/4" x 11 3/4" x 3 7/8", and larger oblong styles.

Variation in the selection of the face cuttings, bond, joint pointing, color of mortar joints—combine to offer the architect in these standard sizes an almost unlimited range of decorative possibilities.

NO. 300 SERIES—The larger size square block results in a wall of larger scale. Rounded corner blocks are standard in this series.





LIGHT TRANSMISSION AND DIFFUSION

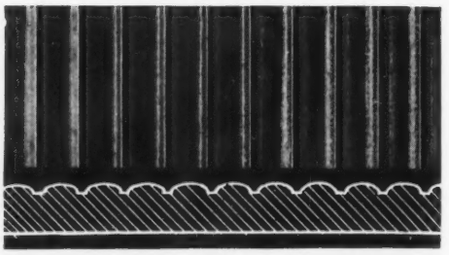
All standard sizes of Insulux Glass Blocks listed on page 3 of this brochure are available in the 4 standard cuttings shown. The various face cuttings have been arrived at through extensive research to obtain an interesting decorative quality, combined with a variation in the light transmission coefficients. The design of the cuttings does not permit a lens effect which would develop glare or a spotty concentration of light.

Owens-Illinois Insulux Glass Blocks are translucent, not transparent —permitting the transmission of light while effectively obscuring images. It is practically impossible to manufacture a hollow glass vessel through which an undistorted image can be viewed. Since transparency in a light transmitting medium is only desirable when and if the image viewed through the medium is perfect, the prismatic cuttings create a pattern which serves as a screen, improves the quality of the light transmitted, eliminates the glare and increases the decorative appeal of the product by giving it a definite texture when laid up to form a glass masonry wall.

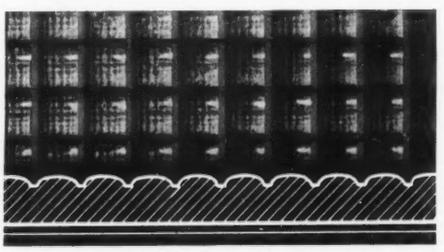
Each face cutting is designated by number. This number, when added to the series number, identifies the block both for size and cutting design. For instance, the 4 7/8" x 8" block (series No. 1) with the face cutting pattern No. 11, would be identified as block No. 1-11. The 5 3/4" x 5 3/4" block (series No. 200) with face cutting pattern No. 11, would be identified as block No. 200-11.

LIGHT TRANSMISSION—Where the intensity of light to be admitted is the factor to be considered in the selection of glass blocks, a variety of face cuttings is offered. A choice can be made according to the light transmission percentages — making interior lighting controllable. The various face cuttings offer a wide range of transmission coefficients. Thus, too brilliant light can be controlled by the choice of a block having a suitably low transmission factor. Where all the light possible is required for interior vision, a wall built of blocks with Cutting No. 11 transmits 86.5% of the incident light. This value is comparable to the transmission value of ordinary windows which have an average coefficient of from 85% to 95%. The exterior faces of the blocks are either smooth or have simple, flat ribs—to minimize the accumulation of surface dirt and to make its removal easy. This is important since the efficiency of any glass as a light transmitting medium is seriously impaired by surface dirt.

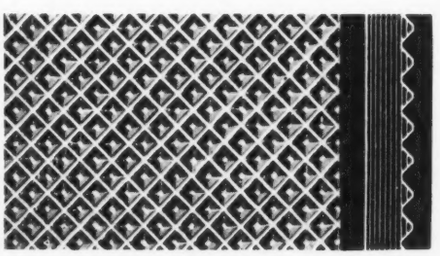
STANDARD CUTTINGS
(Shown Full Size)



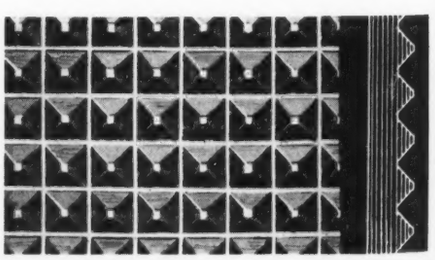
CUTTING NO. 11—Transmits 86.5% of the light falling upon it. 1.15 square feet of this block are equivalent to 1 square foot of ordinary window.



CUTTING NO. 1—Transmits 78.5% of the light falling upon it. 1.3 square feet of this block is equivalent to 1 square foot of ordinary window.



CUTTING NO. 4—Transmits 27.6% of the light falling upon it. 3.6 square feet of this block is the equivalent of 1 square foot of ordinary window.



CUTTING NO. 5—Transmits 11.7% of the light falling upon it. 8.5 square feet of this block, are equivalent to 1 square foot of ordinary window.

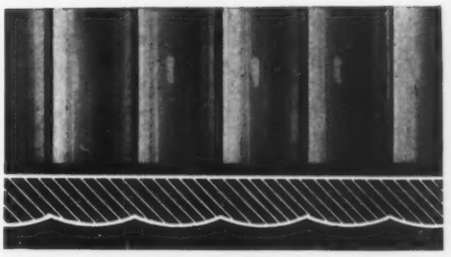
LIGHT DIFUSSION — The light transmitted by Insulux Masonry is diffused perfectly. It is glareless and is comparable to the light from a northernly exposed window or skylight. The elimination of glare and shadows promotes efficiency, comfort and quality of workmanship. This light is particularly desirable for close work. Professor George Sherman of the Physics Department of Purdue University says, as a result of his tests, "When any of the cross rib or pyramid face blocks are held six inches from an intense light such as a high power concentrated filament lamp, no glare is observed when the block is viewed at any angle. In the single rib blocks (No. 11 Cutting) only a very small glare is found under this very severe test. All blocks tested showed an excellent diffusion." An ever-changing decorative effect is produced by the play of light as the angle of vision changes.

STANDARD CUTTINGS—The 4 standard cuttings are illustrated on page 4. Cutting No. 11 consists of vertical ribs which are impressed upon the exterior faces of the block. The design of Cutting No. 1 consists of horizontal ribs on the inside of the 2 faces of the block and vertical ribs on the outside of the 2 faces of the block. Cutting No. 4 consists of very fine pyramidal prisms pressed onto the inside of the 2 faces of the block, the exterior being smooth. Slightly larger pyramidal prisms are pressed upon the inside of the 2 faces of the block to form Cutting No. 5, the exterior being smooth.

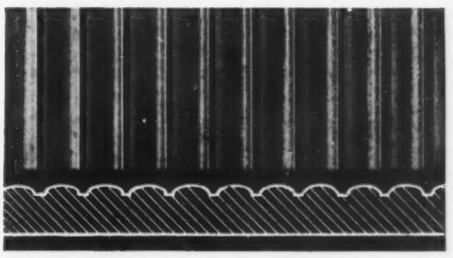
SPECIAL STANDARDS—A number of additional face cuttings are available at no increase in cost, as illustrated at the right. These are designated as "Special Standards." They are not regularly stocked in local warehouses but prompt shipment can be obtained from the factory at Muncie, Indiana. These Special Standard designs offer a further range of light transmission values and decorative possibilities. No. 7 Cutting has large vertical ribs on the inside of both faces, exterior faces smooth. Cutting No. 10 has small ribs vertically on one exterior face and horizontally on the other exterior face, the two interior faces being smooth. Cutting No. 2 has large ribs running vertically on the exterior of both faces, horizontal ribs on the interior of both faces. Cutting No. 3 is similar to Standard Cutting No. 4, except that a diamond pattern is created by small arrises running diagonally and at right angles to each other.

SPECIAL BLOCKS — The Owens-Illinois Glass Company will be pleased to consult with architectural men or other interested persons in the creation of glass masonry blocks for special conditions. Special face cuttings, colored blocks and blocks of special sizes can be produced. Information will be gladly furnished upon request.

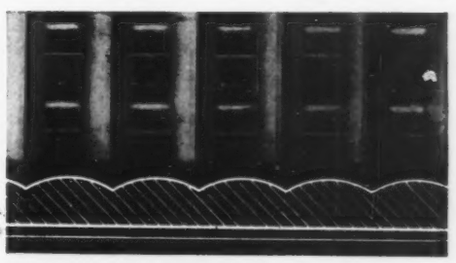
SPECIAL STANDARD CUTTINGS
(Shown Full Size)



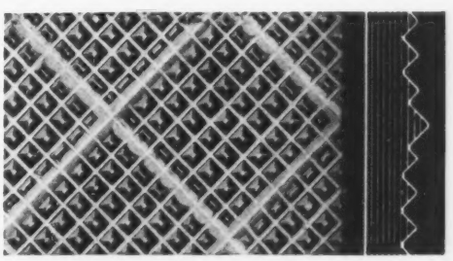
CUTTING NO. 7—Transmits 84.4% of the light falling upon it. 1.19 square feet of this block are equivalent to 1 square foot of ordinary window.



CUTTING NO. 10—Transmits 78.5% of the light falling upon it. 1.30 square feet of this block are equivalent to 1 square foot of ordinary window.



CUTTING NO. 2—Transmits 73.4% of the light falling upon it. 1.36 square feet of this block are equivalent to 1 square foot of ordinary window.



CUTTING NO. 3—Transmits 27.6% of the light falling upon it. 3.6 square feet of this block are equivalent to 1 square foot of ordinary window.

STRUCTURAL STRENGTH

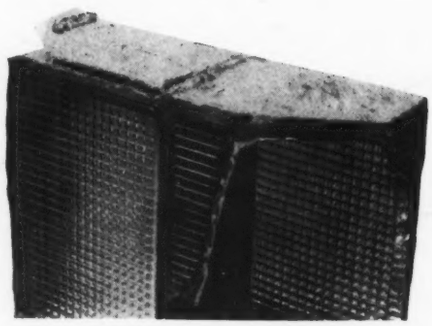
Owens-Illinois Insulux Glass Blocks are manufactured by pressing, which results in absolutely uniform wall thickness impossible to obtain by the more usual blowing process. The uniform wall thickness makes it possible to thoroughly anneal the blocks, thereby developing to the highest degree the natural mechanical strength of the material. That the pressing method results in high structural strength is shown by the fact that it is employed in the manufacture of high voltage glass insulators and other specialized articles where ruggedness and strength for hard and lasting service is required.

COMPRESSIVE STRENGTH — While Insulux Glass Blocks are not being offered as a load-bearing material, they possess ample compressive strength to be self-supporting within the limits prescribed by the ratio of their thickness to any practical height. The average ultimate strength developed by this material in tests* is 800 pounds per square inch with the standard ASTM cap. A safe working load for Insulux Glass Masonry erected in accordance with the specifications appearing on page 30 of this brochure, using a safety factor of 4, is 200 pounds per square inch. The table at the right gives the comparative strength of Insulux Glass Masonry and other common masonry materials.

LATERAL STRENGTH — There is no evidence that where the structural framework of a building affords reasonably rigid support to the enclosing walls, the pressure resulting from maximum wind velocities in most parts of this country is an important factor in wall design. Tests* show that a panel 10′ - 0″ x 15′ - 0″ would withstand a 90 to 100 mile gale at the usual 20 pounds to the square foot with a safety factor of about 4. Insulux Glass Masonry showed an ultimate pressure on panels 7′ - 3″ x 8′ - 6″ of approximately 8 times that used in the design of buildings up to 80′ - 0″ in height.

IMPACT STRENGTH — Insulux Glass Masonry has many times the strength of ordinary window glazing. A heavy blow from a hard object is required to shatter them. Replacement of fractured blocks is easily made.

MORTAR BOND STRENGTH — The standard requirement for mortar bond in brickwork is 13.8 pounds per square inch in tension. Tests* on Insulux Glass Masonry show an average of 16 pounds per square inch. Similarly, they have proved equal in shear to many other masonry materials.



The photograph illustrates the bond of the mortar and the special gritty surface coating with which the 4 mortar-bearing surfaces of the glass block are treated. This coating is water, alkali and acid resisting, insuring a high degree of bond between the mortar and the glass, and eliminating the likelihood of moisture penetration through the mortar joints.

The Building Code Committee of the Dept. of Commerce recommends the following working stresses in compression in lbs. per sq. in. They are presented here for comparison with Insulux Glass Masonry:

P. C. Concrete, 1:3:5	400
Brickwork, Lime and P. C. Mortar	130
Hollow Tile Blocks	80
Hollow Concrete Blocks	80
Rubble Stonework, P. C. Mortar	140
Insulux Translucent Masonry*	200

THERMAL EXPANSION—The expansion and contraction of Insulux Glass Blocks under temperature changes correspond closely with those of mortar and steel—the materials with which they are used.

*Tests by the Engineering Dept. of Purdue University.

RESISTANCE TO HEAT LOSS

The high resistance of Insulux Glass Masonry to heat loss by conduction or infiltration reduces the cost of maintenance for air conditioning and artificial heating. It offers protection against penetration of solar heat. In the manufacturing process, the air in the hollow glass block is trapped at a very high temperature. When the block is cooled it contains only thoroughly dry air under partial vacuum of 40% to 60%, the rarified, dead air trapped in small volume forming an excellent heat insulator. Tests* show Insulux Block to be one of the best insulators among building materials, and unique when its light-transmitting properties are also considered.

These tests indicate that a large percentage of the heat flow makes its path through the mortar joints and block beds, rather than through the hollow interior. To obtain a total vacuum in the blocks would result in extremely high manufacturing costs without an appreciable increase in their thermal resistance.

CONDUCTION — Tests* show that Insulux Glass Masonry walls transmit only 0.29 Btu's per square foot per hour per degree difference in temperature F. Reference to the table at the right will show the great economy in maintenance gained from the use of Insulux as compared with other light-admitting materials, as well as its favorable comparison with non-light-admitting walls.

INFILTRATION — Air infiltration through cracks around windows represents an appreciable heat loss either in air conditioning or heating. Insulux Translucent Masonry used to admit light minimizes this loss. If openings must be used for natural ventilation, they can be much smaller in area and periphery than if they were also required to admit light.

SOLAR RADIATION — It has been found† that Insulux Translucent Masonry reduces the temperature due to direct sunlight of an enclosed space 25% to 40% as compared with an equal area of single glazed steel sash for the midday period of 4 hours. This reduction in midday heating effect, coupled with the known lower conductivity of the glass block section, accounts for the far greater uniformity in the temperature of the space enclosed by it throughout the working day. Compared with an equal area of ordinary window glazing, Insulux Translucent Masonry results in less difficulty in maintaining uniform temperature throughout the year, cooler temperatures in summer, a more uniform load on the heating plant in the winter.

Average coefficients of heat transmission in Btu's per hour per square foot per F° difference in temperature are based on a wind velocity of 15 mph. Coefficients for masonry walls marked ‡ are furred and have 3/4" plaster on metal lath.

3-7/8" Insulux Glass Masonry Wall	0.29
Single glazed window	1.13
Single glazed skylight	1.13
8" solid brick wall‡	0.32
12" solid brick wall‡	0.25
Stuccoed 8" hollow tile wall‡	0.27
Stuccoed 12" hollow tile wall‡	0.22
16" concrete wall‡	0.31
12" concrete block wall‡	0.32
4" hollow gypsum, plastered both sides	0.27
4" hollow clay tile, plastered both sides	0.40
2" solid plaster	0.53

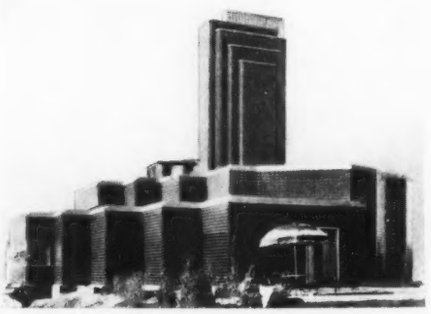
In tests conducted by the Department of Heating and Ventilating, Purdue University, the temperature of the surface of an Insulux Glass Masonry panel was 87.4° F. with an inside air temperature of 98° and an outside air temperature of 62°. The small difference of 10.6° between the surface of the block and the inside air furnishes an easily understood proof of the low conduction of Insulux Glass Masonry.

*Tests by Purdue University.
†Tests by Arthur D. Little, Inc.

SOUND DEADENING

Minute vibrations are set up in partitions consisting of single thin thicknesses of wood, glass or metal by the alternating pressure of the incident sound. The amount of transmission depends upon the mass or stiffness of the partition. Partitions constructed of Insulux Glass Masonry possess rigidity and thickness, making them effective in deadening the transmission of sound.

The usually accepted coefficient of sound absorption for glass at 512 cycles per second frequency is given as 0.027.



A daylight view of the Owens-Illinois Building at the Century of Progress Exposition. Architect, Eloy Ruiz. This building was erected as an Exposition novelty, but nevertheless marked a definite phase in the development of glass building blocks.

FIRE RESISTANCE

In order to resist the passage of flames and to form an effective fire stop to fires of the usual duration and intensity, it is necessary to prevent a major hole through the material. Crazing and cracking, however severe, do not destroy the value of the material as a fire stop. A major hole through an Insulux Glass Masonry wall or steel sash glazed with wired glass might be caused by the fusing of the glass from the high temperature. However, due to the thickness of the glass shell in Insulux Glass Blocks and the existence of two faces, the glass does not fuse to create a hole within the limits of temperature encountered under ordinary conditions. The cooling and impact of fire streams result in cracks and crazing but do not result in failure of the Insulux Glass Masonry wall under conditions encountered with proper fire protection.

The lighting of this building makes it as beautiful by night as by day. Built entirely of Insulux Translucent Masonry, it withstood the extremely rigorous weather conditions of the Chicago lake front, proving the practicality of glass masonry construction.

MOISTURE PENETRATION

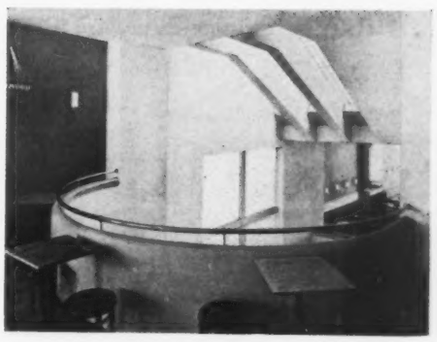
Moisture can only penetrate an Insulux Glass Masonry wall through the mortar joints. Experiment has shown that under conditions more rigorous than actual weather conditions no moisture appears upon the inside surface of a glass masonry wall. The moisture travels in such small quantities by capillary action through the mortar joints that it is evaporated on the inside before it can collect into drops.

Neither under test nor in actual use has condensation collected on the inside surface of an Insulux Glass Masonry wall within practical ranges of temperature, humidity and air motion.*

***In still air the outdoor temperature necessary to produce surface condensation on the inside of an Insulux Glass Masonry wall is minus 16.4° F. with an inside temperature of 70° F. and a relative humidity of 40%. (Purdue University test.)**

CLEANLINESS AND MAINTENANCE

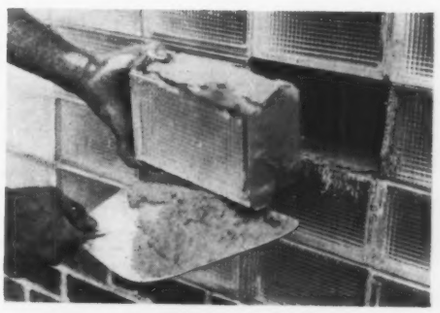
Insulux Glass Masonry has the high sanitary property that is inherent in glass. The surface of glass is non-porous which prevents the passage of air and gases and will not absorb odors, water, grease. Several of the face cutting designs of Insulux Glass Blocks have smooth exterior faces, the prismatic cutting being impressed upon the interior of the faces of the glass. In other designs the faces have simple, flat, rounded ribs on the exterior of the faces. The simplicity of the surfaces thus obtained minimizes the accumulation of surface dirt and makes its removal easy. The use of glass masonry eliminates air infiltration which is often a path by which dirt and dust enter a building. The hard brilliant surface of glass blocks does not disintegrate and cannot be easily marked, written upon or defaced. The weather does not affect glass masonry, it does not oxidize, it requires no painting nor other interior finish.



European architects have long been familiar with glass block construction. This kaffeehaus by architect Bohuslav Fuchs illustrates a striking combination of its functional and decorative use.

REMOVAL AND REPLACEMENT

A damaged glass block can be removed easily from the wall by drilling holes in the mortar joint in opposite corners and then inserting a keyhole saw through the joint and sawing out the block, or it can be broken out by hammer, taking proper precautions against flying and broken glass. The new block is then buttered with mortar, inserted in place and the job completed by pointing.



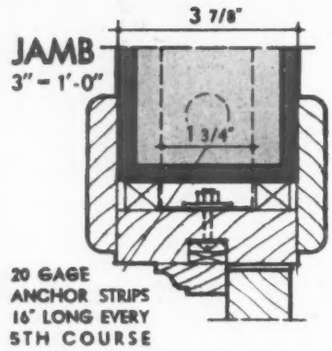
The buttered block is easily replaced and pointing the joint completes the job. In cases where adjacent blocks are to be replaced, 3 blocks high or 2 blocks wide may be removed and replaced at one time. In cases of breakage, glass blocks are as easily removed and replaced as a pane of sash glass.

USES OF INSULUX MASONRY

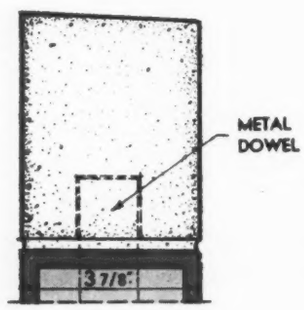
Since Insulux Translucent Masonry admits diffused light of desirable character without allowing heat flow, it offers an economy in the construction of air conditioned and artificially heated buildings obtainable in no other building material. The sanitary properties make glass masonry desirable for use in such buildings as hospitals, dairies, bakeries and breweries. The water-clear glass may be floodlighted to produce striking and easily varied decorative effects. The diffusion characteristics definitely indicate its use in public schools, shops, offices, or any place where close work is the daily routine and shadows are undesirable. It is felt that an infinite number of applications will suggest themselves, far beyond the scope of any tabulation that might be attempted.

The exterior of glass masonry panels are kept practically free of dirt by rains. In industrial buildings the dirt accumulation on the interior of glass is approximately three times as great as that of the exterior. Therefore, it is even more desirable to have the ribs running vertically on the interior of a glass masonry wall.

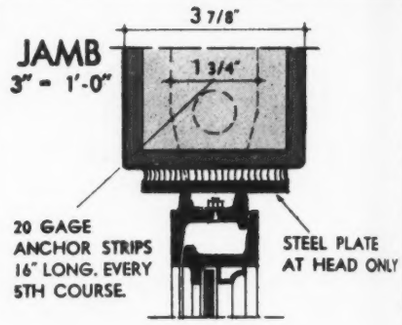
Below are shown various details for openings through Insulux Masonry walls. Doors, windows, louvers or other openings can be made as easily as with other types of masonry. Any type of frame or trim is easily installed. The frames for openings, with their anchors bent at 90°, should be put in place first and the glass masonry built to them. The size of frames for openings should be adjusted to the course heights of the blocks to be used since blocks cannot be chipped to fit uneven spaces as can other masonry. Different methods of anchoring large panels of translucent masonry to intermediate supports are illustrated.



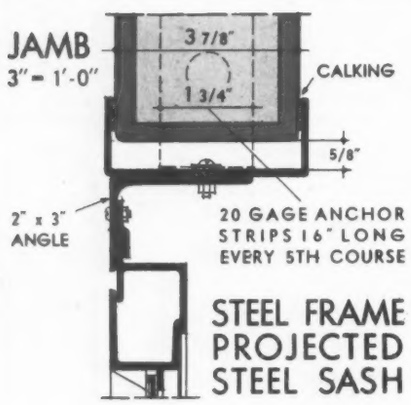
WOOD DOOR FRAME



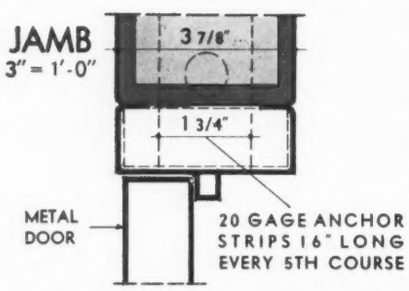
STONE COPING



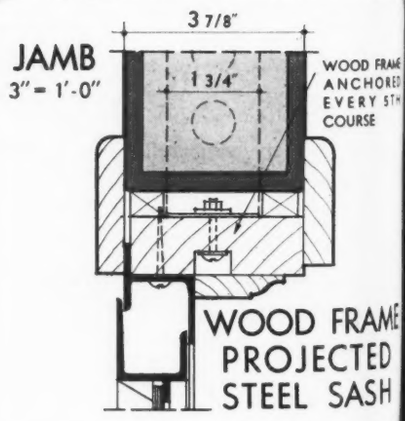
STEEL CASEMENT DOOR



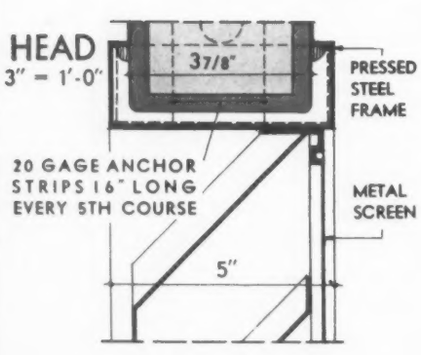
STEEL FRAME PROJECTED STEEL SASH



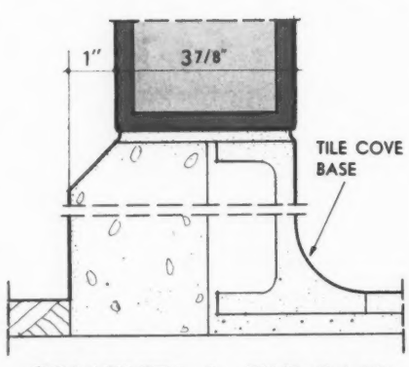
PRESSED STEEL FRAME FOR INTERIOR DOOR



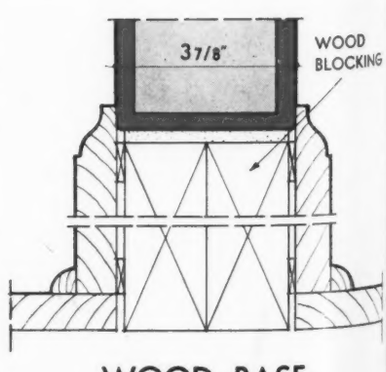
WOOD FRAME PROJECTED STEEL SASH



METAL LOUVER

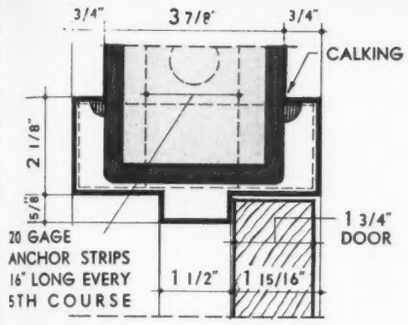


CONCRETE & TILE BASE



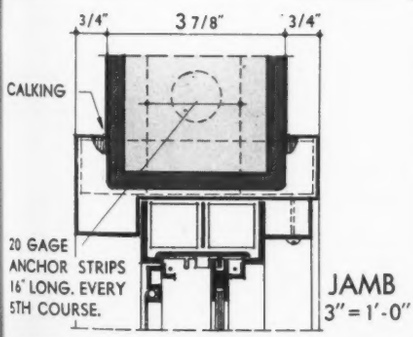
WOOD BASE

TYPICAL DETAILS OF INSULUX CONSTRUCTION

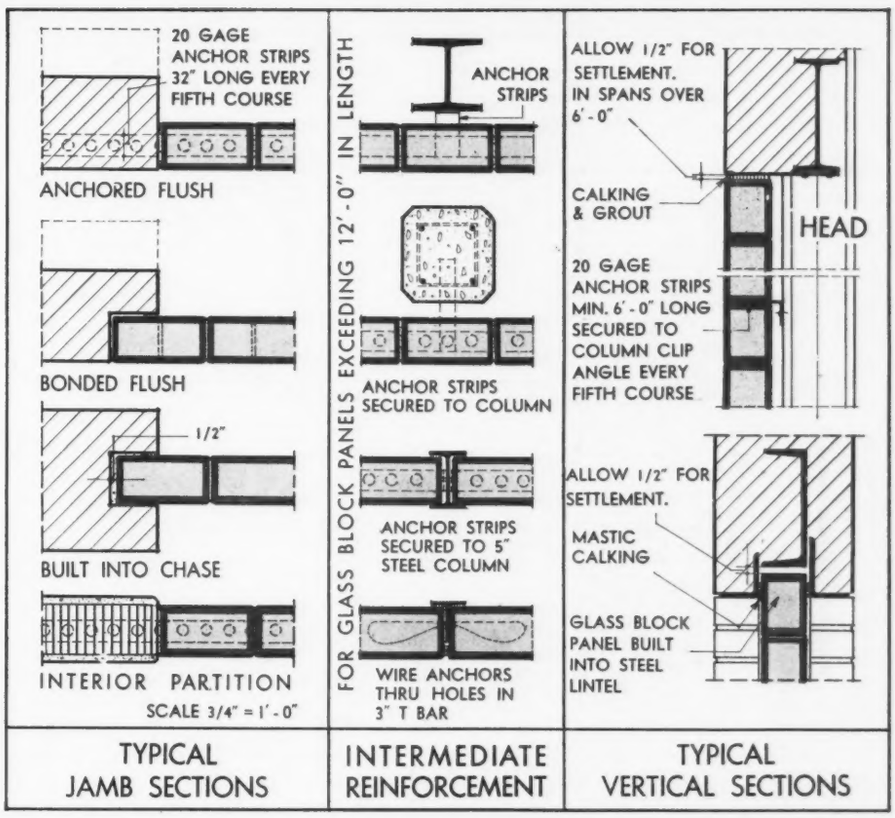


JAMB SCALE 3"= 1'-0"

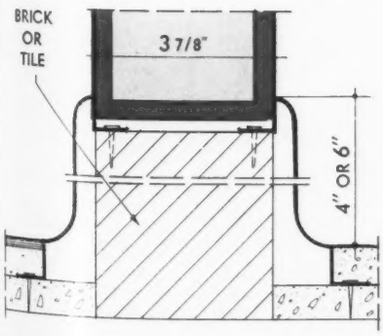
METAL DOOR FRAME



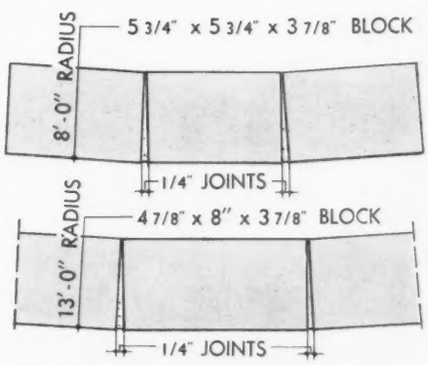
PRESSED METAL FRAME & METAL D. H. WINDOW



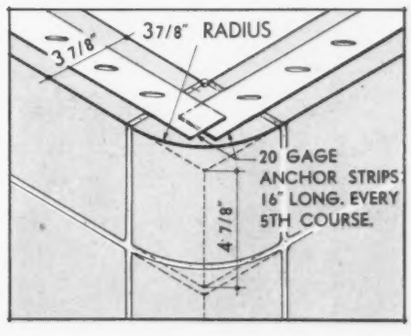
REINFORCING & ANCHORING PANELS IN MASONRY WALLS



PRESSED METAL BASE



MINIMUM LAYING RADIUS



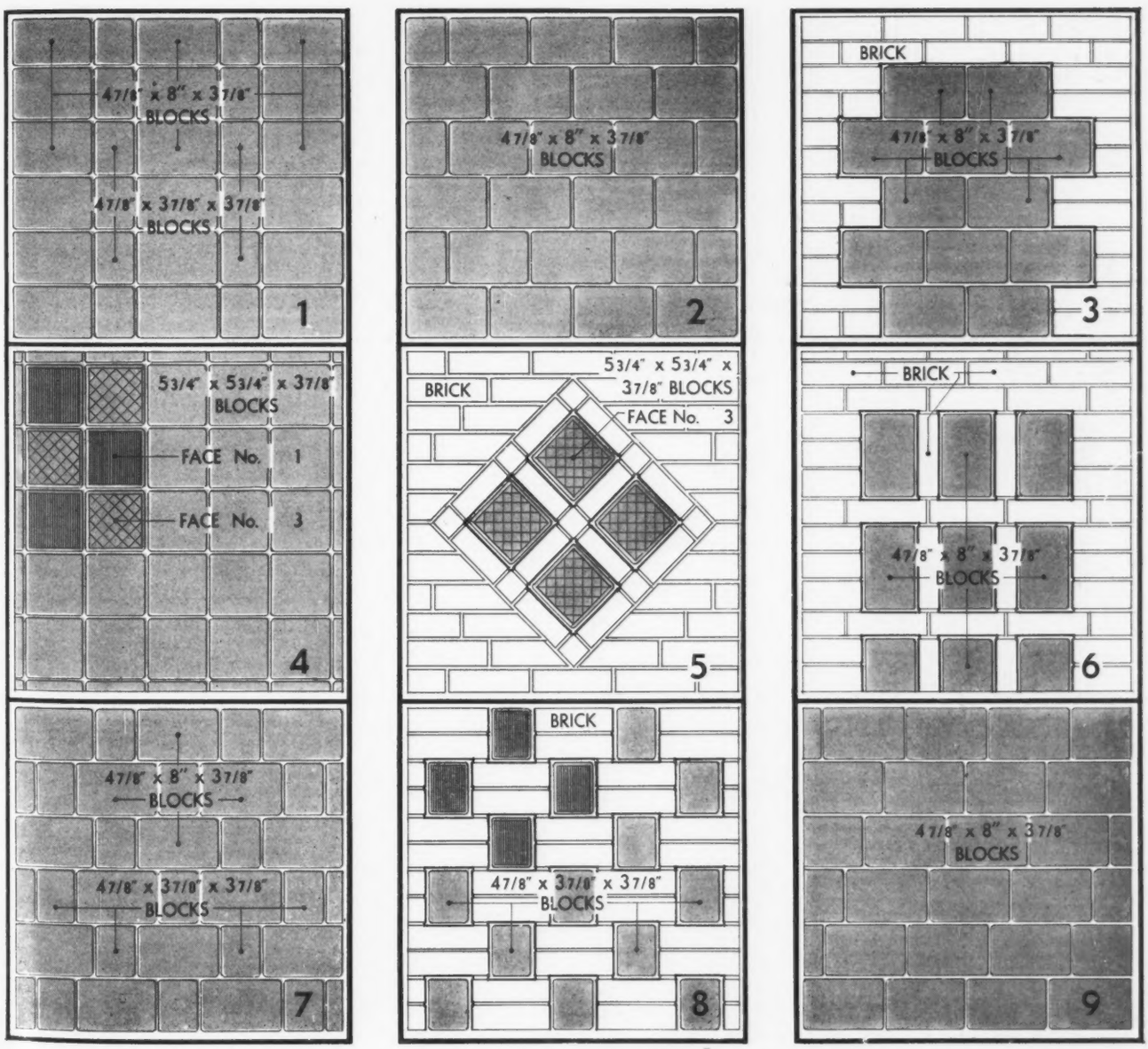
CORNER BLOCK FOR 90° Ls

Insulux Glass Blocks offer many possibilities for patterns, either used alone or combined with ordinary brickwork or other masonry. In Figure 1, the half block has been combined with the rectangular block. Figure 2 is ordinary Running Bond. Figure 3 shows the glass block bonded into a brick masonry wall by means of quoins. The Checkerboard Bond shown in Figure 4 can be varied by the selection of different face cuttings. Figure 7 illustrates the use of the half blocks by means of which almost any brick bond pattern can be rendered in glass masonry. Figure 9 shows Spiral Bond which requires a chase at the jambs to cover the start of the pattern.

DIMENSIONS OF INSULUX GLASS MASONRY

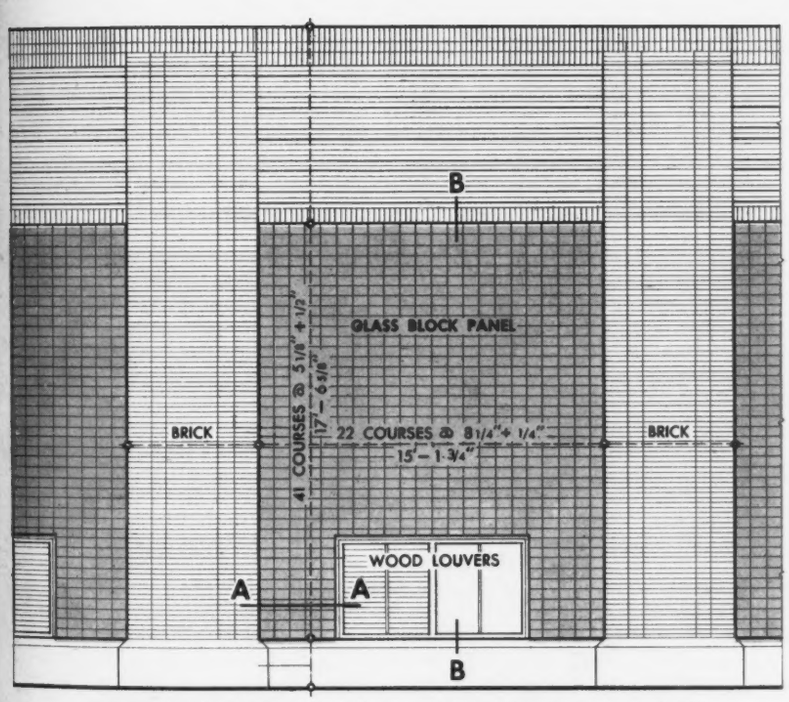
Number of Units	47/8" x 8"				53/4" x 53/4"		73/4" x 73/4"	
	Height		Width		Height or Width		Height or Width	
	1/4" joints	3/16" joints	1/4" joints	3/16" joints	1/4" joints	3/16" joints	1/4" joints	3/16" joints
1	5 1/8"	5 1/16"	8 1/4"	8 3/16"	6"	5 15/16"	8"	7 15/16"
2	10 1/4"	10 1/8"	1'- 4 1/2"	1'- 4 3/8"	1'- 0"	11 7/8"	1'- 4"	1'- 3 7/8"
3	1'- 3 3/8"	1'- 3 3/16"	2'- 0 3/4"	2'- 0 9/16"	1'- 6"	1'- 5 13/16"	2'- 0"	1'- 11 13/16"
4	1'- 8 1/2"	1'- 8 1/4"	2'- 9"	2'- 8 3/4"	2'- 0"	1'- 11 3/4"	2'- 8"	2'- 7 3/4"
5	2'- 1 5/8"	2'- 1 5/16"	3'- 5 1/4"	3'- 4 15/16"	2'- 6"	2'- 5 11/16"	3'- 4"	3'- 3 11/16"
6	2'- 6 3/4"	2'- 6 3/8"	4'- 1 1/2"	4'- 1 1/8"	3'- 0"	2'- 11 5/8"	4'- 0"	3'- 11 5/8"
7	2'- 11 7/8"	2'- 11 7/16"	4'- 9 3/4"	4'- 9 5/16"	3'- 6"	3'- 5 9/16"	4'- 8"	4'- 7 9/16"
8	3'- 5"	3'- 4 1/2"	5'- 6"	5'- 5 1/2"	4'- 0"	3'- 11 1/2"	5'- 4"	5'- 3 1/2"
9	3'- 10 1/8"	3'- 9 9/16"	6'- 2 1/4"	6'- 1 11/16"	4'- 6"	4'- 5 7/16"	6'- 0"	5'- 11 7/16"
10	4'- 3 1/4"	4'- 2 5/8"	6'- 10 1/2"	6'- 9 7/8"	5'- 0"	4'- 11 3/8"	6'- 8"	6'- 7 3/8"
11	4'- 8 3/8"	4'- 7 11/16"	7'- 6 3/4"	7'- 6 1/16"	5'- 6"	5'- 5 5/16"	7'- 4"	7'- 3 5/16"
12	5'- 1 1/2"	5'- 0 3/4"	8'- 3"	8'- 2 1/4"	6'- 0"	5'- 11 1/4"	8'- 0"	7'- 11 1/4"
13	5'- 6 5/8"	5'- 5 13/16"	8'- 11 1/4"	8'- 10 7/16"	6'- 6"	6'- 5 3/16"	8'- 8"	8'- 7 3/16"
14	5'- 11 3/4"	5'- 10 7/8"	9'- 7 1/2"	9'- 6 5/8"	7'- 0"	6'- 11 1/8"	9'- 4"	9'- 3 1/8"
15	6'- 4 7/8"	6'- 3 15/16"	10'- 3 3/4"	10'- 2 13/16"	7'- 6"	7'- 5 1/16"	10'- 0"	9'- 11 1/16"
16	6'- 10"	6'- 9"	11'- 0"	10'- 11"	8'- 0"	7'- 11"	10'- 8"	10'- 7"
17	7'- 3 1/8"	7'- 2 1/16"	11'- 8 1/4"	11'- 7 3/16"	8'- 6"	8'- 4 15/16"	11'- 4"	11'- 2 15/16"
18	7'- 8 1/4"	7'- 7 1/8"	12'- 4 1/2"	12'- 3 3/8"	9'- 0"	8'- 10 7/8"	12'- 0"	11'- 10 7/8"
19	8'- 1 3/8"	8'- 0 3/16"	13'- 0 3/4"	12'- 11 9/16"	9'- 6"	9'- 4 13/16"	12'- 8"	12'- 6 13/16"
20	8'- 6 1/2"	8'- 5 1/4"	13'- 9"	13'- 7 3/4"	10'- 0"	9'- 10 3/4"	13'- 4"	13'- 2 3/4"
21	8'- 11 5/8"	8'- 10 5/16"	14'- 5 1/4"	14'- 3 15/16"	10'- 6"	10'- 4 11/16"	14'- 0"	13'- 10 11/16"
22	9'- 4 3/4"	9'- 3 3/8"	15'- 1 1/2"	15'- 0 1/8"	11'- 0"	10'- 10 5/8"	14'- 8"	14'- 6 5/8"
23	9'- 9 7/8"	9'- 8 7/16"	15'- 9 3/4"	15'- 8 5/16"	11'- 6"	11'- 4 9/16"	15'- 4"	15'- 2 9/16"
24	10'- 3"	10'- 1 1/2"	16'- 6"	16'- 4 1/2"	12'- 0"	11'- 10 1/2"	16'- 0"	15'- 10 1/2"
25	10'- 8 1/8"	10'- 6 9/16"	17'- 2 1/4"	17'- 0 11/16"	12'- 6"	12'- 4 7/16"	16'- 8"	16'- 6 7/16"
26	11'- 1 1/4"	10'- 11 5/8"	17'- 10 1/2"	17'- 8 7/8"	13'- 0"	12'- 10 3/8"	17'- 4"	17'- 2 3/8"
27	11'- 6 3/8"	11'- 4 11/16"	18'- 6 3/4"	18'- 5 1/16"	13'- 6"	13'- 4 5/16"	18'- 0"	17'- 10 5/16"
28	11'- 11 1/2"	11'- 9 3/4"	19'- 3"	19'- 1 1/4"	14'- 0"	13'- 10 1/4"	18'- 8"	18'- 6 1/4"
29	12'- 4 5/8"	12'- 2 13/16"	19'- 11 1/4"	19'- 9 7/16"	14'- 6"	14'- 4 3/16"	19'- 4"	19'- 2 3/16"
30	12'- 9 3/4"	12'- 7 7/8"	20'- 7 1/2"	20'- 5 5/8"	15'- 0"	14'- 10 1/8"	20'- 0"	19'- 10 1/8"
31	13'- 2 7/8"	13'- 0 15/16"	21'- 3 3/4"	21'- 1 13/16"	15'- 6"	15'- 4 1/16"	20'- 8"	20'- 6 1/16"
32	13'- 8"	13'- 6"	22'- 0"	21'- 10"	16'- 0"	15'- 10"	21'- 4"	21'- 2"
33	14'- 1 1/8"	13'- 11 1/16"	22'- 8 1/4"	22'- 6 3/16"	16'- 6"	16'- 3 15/16"	22'- 0"	21'- 9 15/16"
34	14'- 6 1/4"	14'- 4 1/8"	23'- 4 1/2"	23'- 2 3/8"	17'- 0"	16'- 9 7/8"	22'- 8"	22'- 5 7/8"

GLASS MASONRY BOND PATTERNS


4 7/8" x 8" x 3 7/8" BLOCKS
4 7/8" x 3 7/8" x 3 7/8" BLOCKS
1
4 7/8" x 8" x 3 7/8" BLOCKS
2
BRICK
4 7/8" x 8" x 3 7/8" BLOCKS
3
5 3/4" x 5 3/4" x 3 7/8" BLOCKS
FACE No. 1
FACE No. 3
4
BRICK
5 3/4" x 5 3/4" x 3 7/8" BLOCKS
FACE No. 3
5
BRICK
4 7/8" x 8" x 3 7/8" BLOCKS
6
4 7/8" x 8" x 3 7/8" BLOCKS
4 7/8" x 3 7/8" x 3 7/8" BLOCKS
7
BRICK
4 7/8" x 3 7/8" x 3 7/8" BLOCKS
8
4 7/8" x 8" x 3 7/8" BLOCKS
9

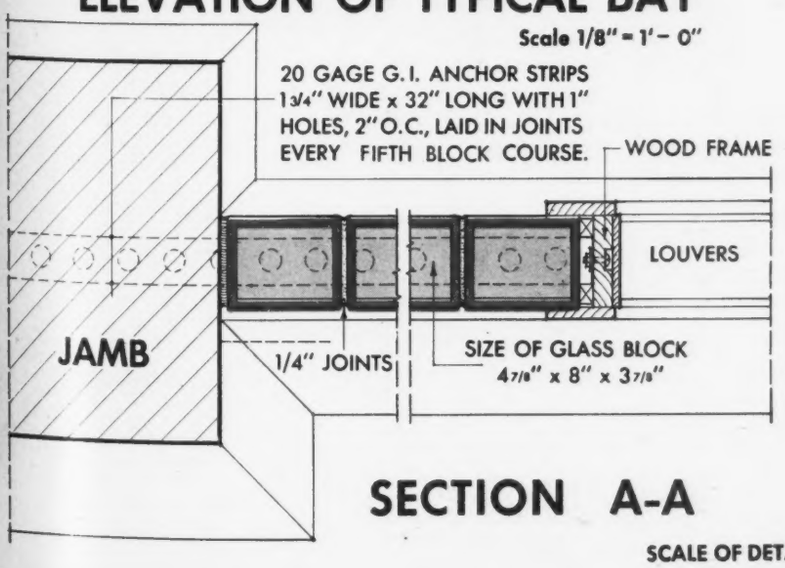
The obsolescence of industrial buildings is in many cases no less than that of the machinery and equipment which they house. With the increase in efficiency brought by modern air conditioning methods, the heat loss of large windows becomes a critical item of maintenance. The use of Insulux Translucent Masonry provides perfectly diffused lighting and reduces the cost of heating during the cold months and air conditioning during the summer.

MODERNIZATION OF INDUSTRIAL BUILDINGS

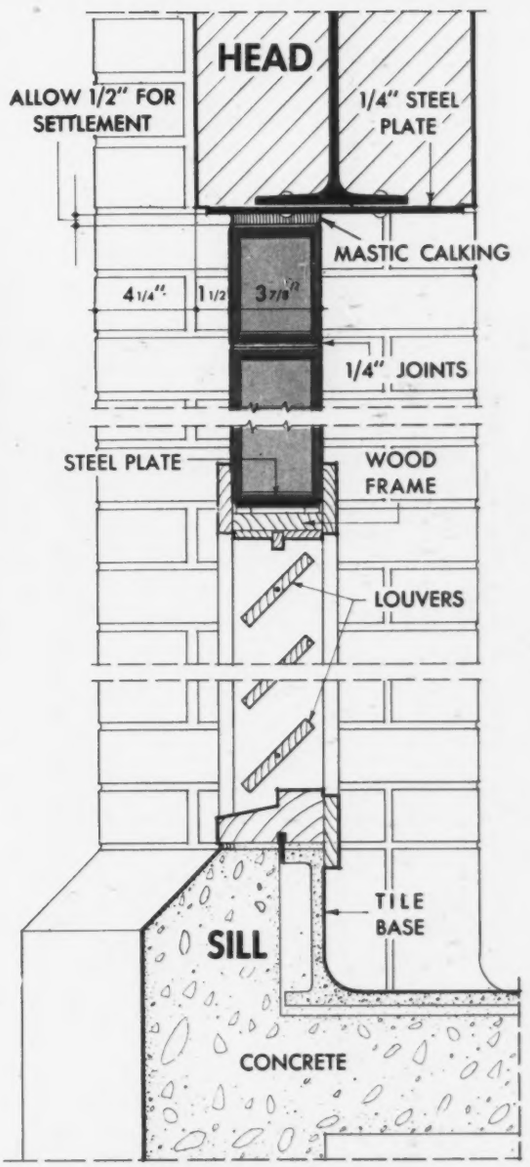


ELEVATION OF TYPICAL BAY

Scale 1/8" = 1' - 0"


20 GAGE G.I. ANCHOR STRIPS
1 3/4" WIDE x 32" LONG WITH 1"
HOLES, 2" O.C., LAID IN JOINTS
EVERY FIFTH BLOCK COURSE.
WOOD FRAME
LOUVERS
JAMB
1/4" JOINTS
SIZE OF GLASS BLOCK
4 7/8" x 8" x 3 7/8"

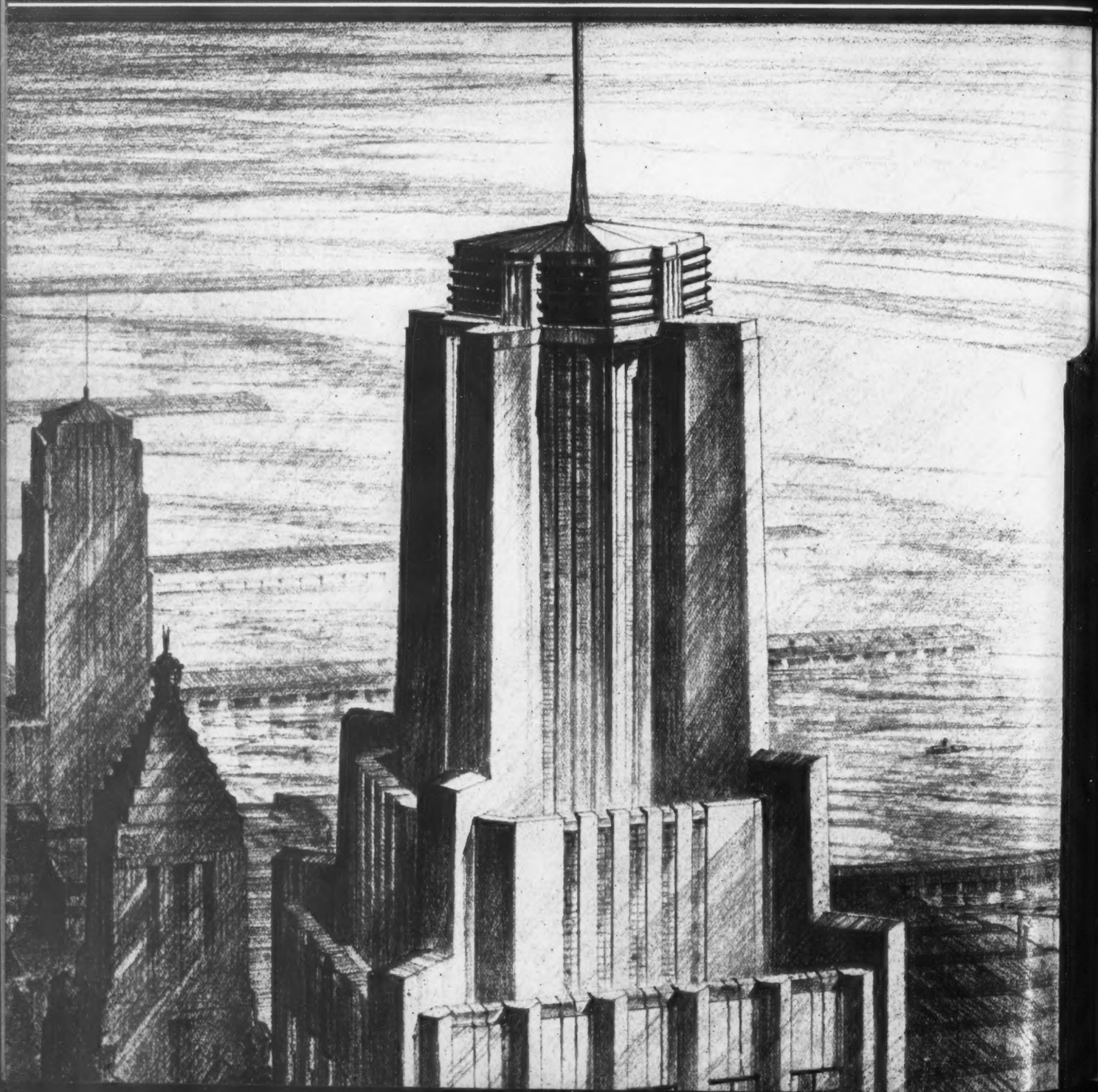
SECTION A-A



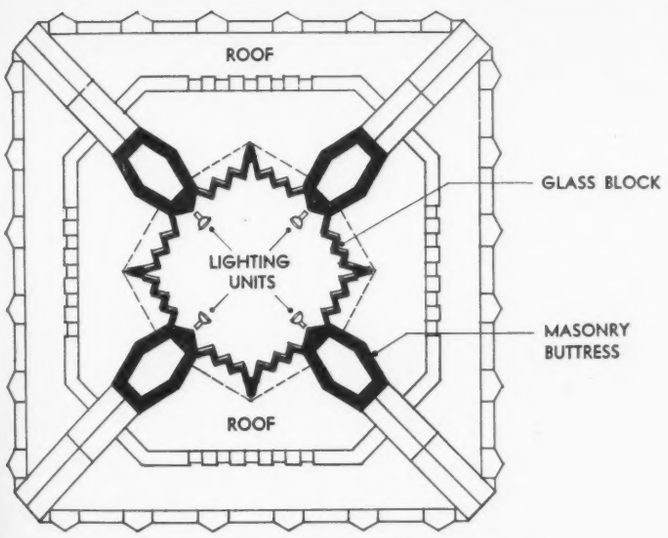
SECTION B-B

SCALE OF DETAILS: 1 1/2" = 1' - 0"

Building management officials have discovered the importance of night-lighting in simplifying the rental problem. Office buildings acquire character, individuality and personality—becoming well known through the medium of proper illumination. Insulux Glass Masonry provides the architect with a new medium of expression, enabling him to create unique lighting effects that will set his buildings apart from those with ordinary floodlighting. Insulux Glass Masonry allows him to design with light—instead of merely painting with light.

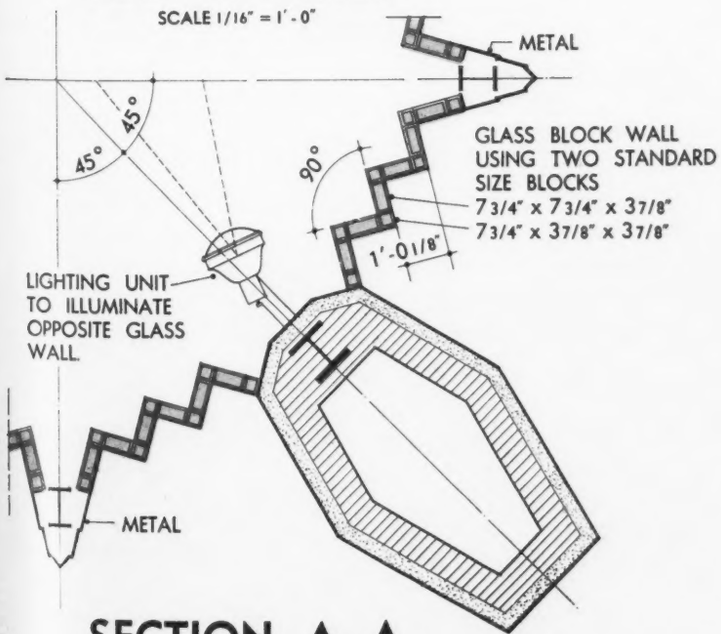


MODERN EXTERIORS OF INSULUX



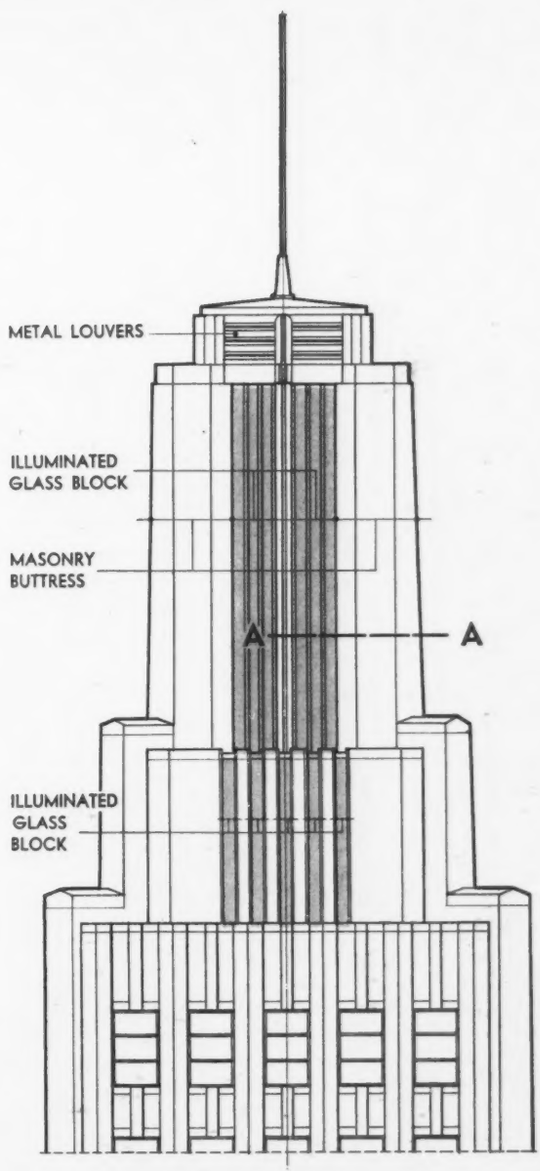
PLAN OF TOWER

SCALE 1/16" = 1'-0"



SECTION A A

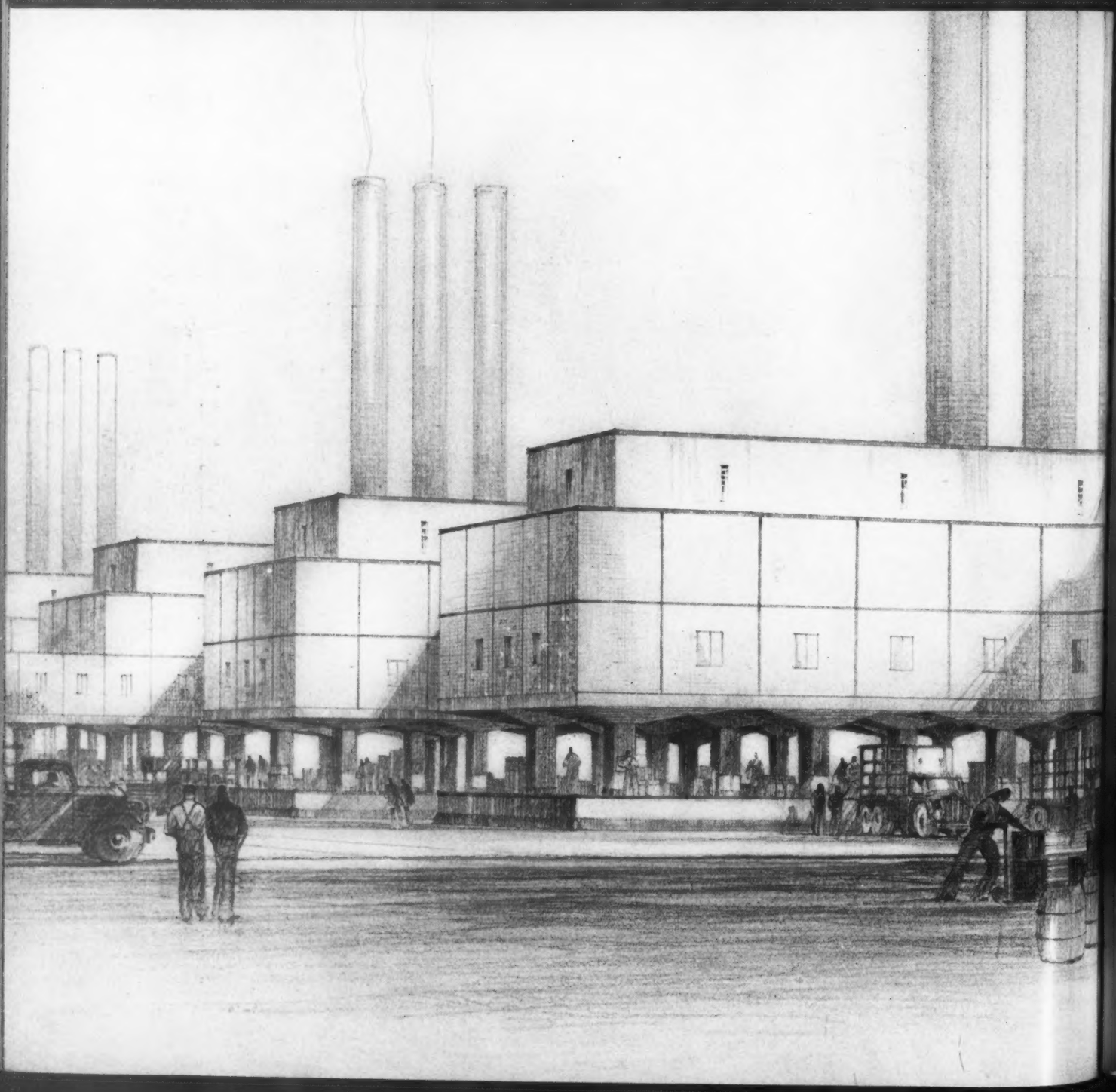
SCALE 1/4" = 1'-0"



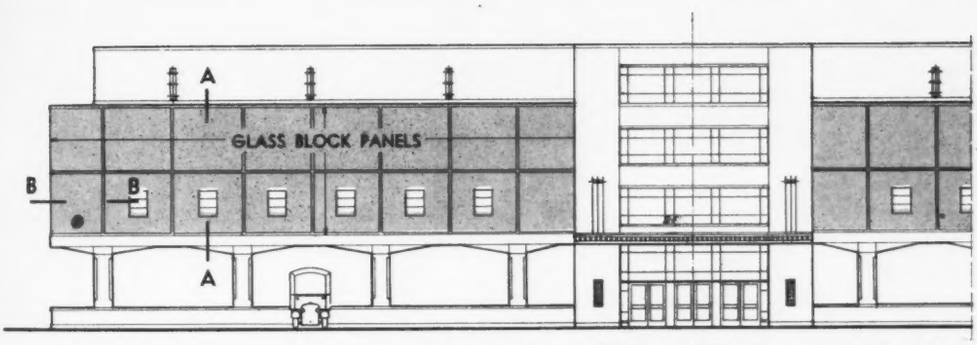
TOWER OF A COMMERCIAL BUILDING

SCALE 1/16" = 1'-0"

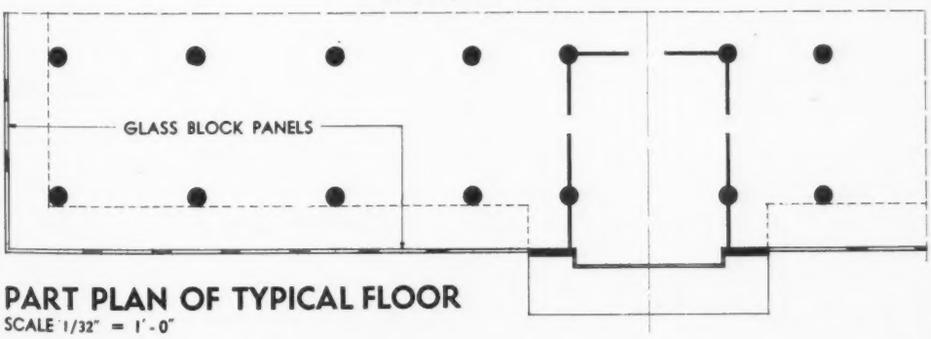
The walls of industrial buildings requiring an abundance of glareless light for manufacturing processes, can be built entirely of glass masonry, as shown on these pages. Food factories, dairies and other buildings necessitating a high degree of sanitation, will find Insulux particularly suitable. Vision is obtained by the use of ordinary windows. In the illustration, the glass wall is supported on a cantilever slab, light intermediate and horizontal supports breaking the glass masonry into practical areas.



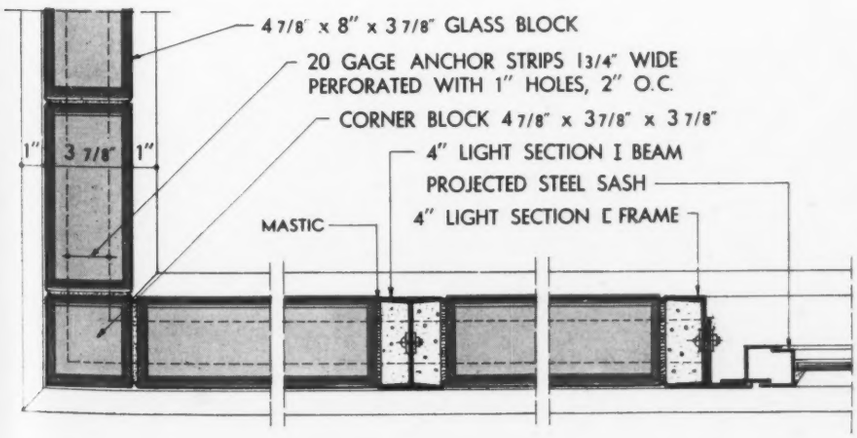
INDUSTRIAL BUILDINGS OF INSULUX



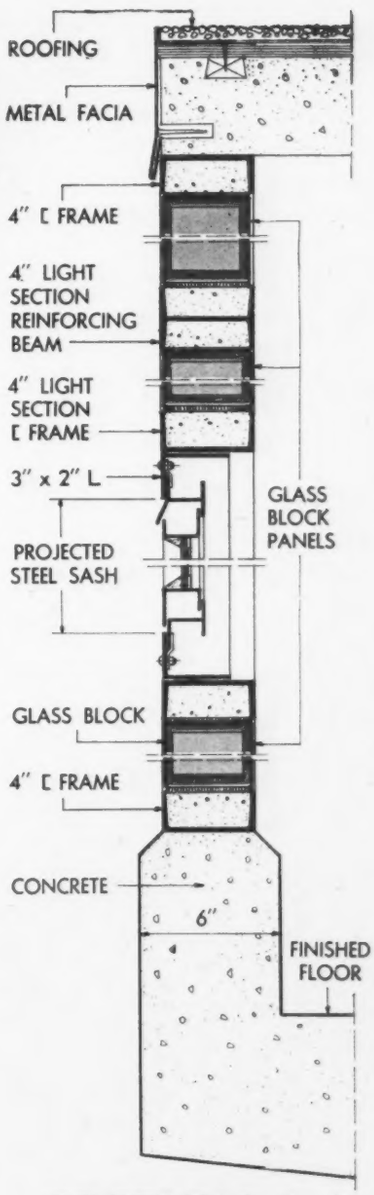
ELEVATION OF A MODERN INDUSTRIAL BUILDING
SCALE 1/32" = 1'-0"



PART PLAN OF TYPICAL FLOOR
SCALE 1/32" = 1'-0"


4 7/8" x 8" x 3 7/8" GLASS BLOCK
20 GAGE ANCHOR STRIPS 1 3/4" WIDE PERFORATED WITH 1" HOLES, 2" O.C.
CORNER BLOCK 4 7/8" x 3 7/8" x 3 7/8"
4" LIGHT SECTION I BEAM
PROJECTED STEEL SASH
4" LIGHT SECTION C FRAME
MASTIC
1"
3 7/8"
1"

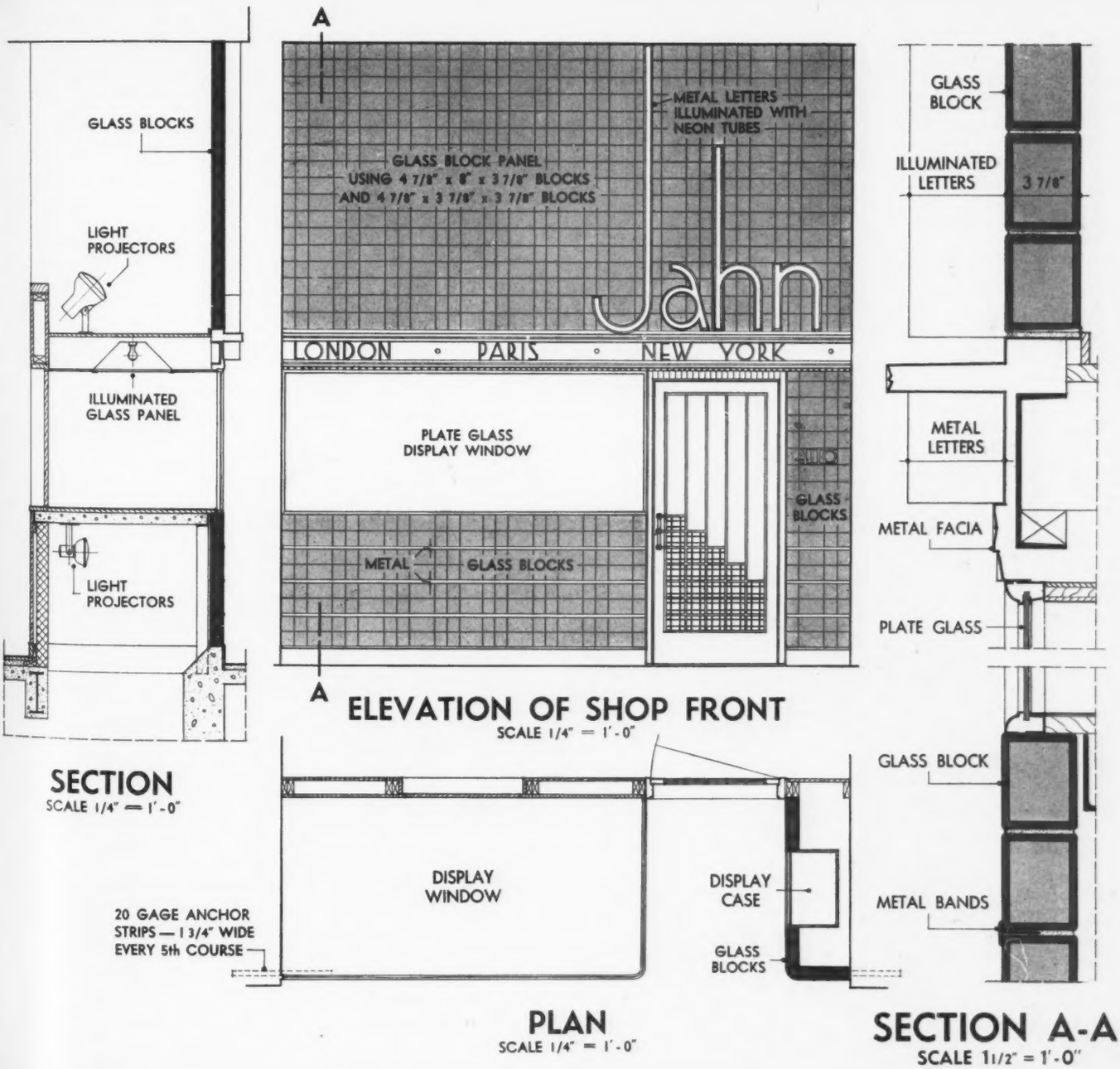
SECTION B-B
SCALE 1 1/2" = 1'-0"



SECTION A-A
SCALE 1 1/2" = 1'-0"

In the design shown on this page, advantage has been taken of both the functional and the decorative properties of the material. The glass bulkhead and spandrel admit light into the building during the daylight hours, or can be floodlighted from the inside to increase the "eye appeal" of the front. Colored floodlighting at night turns the store front into a compelling advertisement. The use of water-clear blocks permits great flexibility in the color scheme. A simple change in the lamps or screens used in the artificial lighting results in an entirely new effect whenever desired.

STORE FRONT DESIGN IN INSULUX



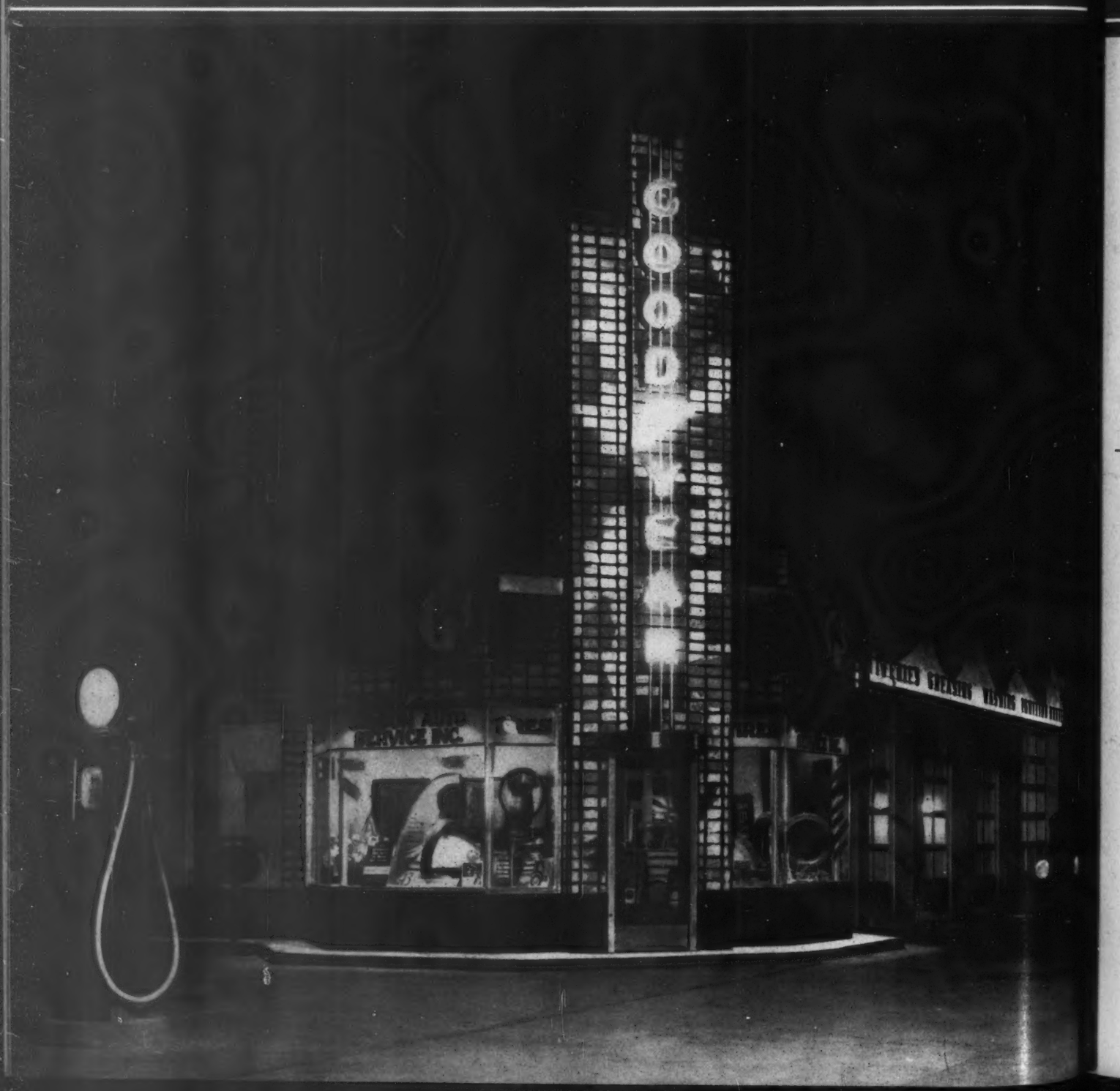
SECTION
SCALE 1/4" = 1'-0"

ELEVATION OF SHOP FRONT
SCALE 1/4" = 1'-0"

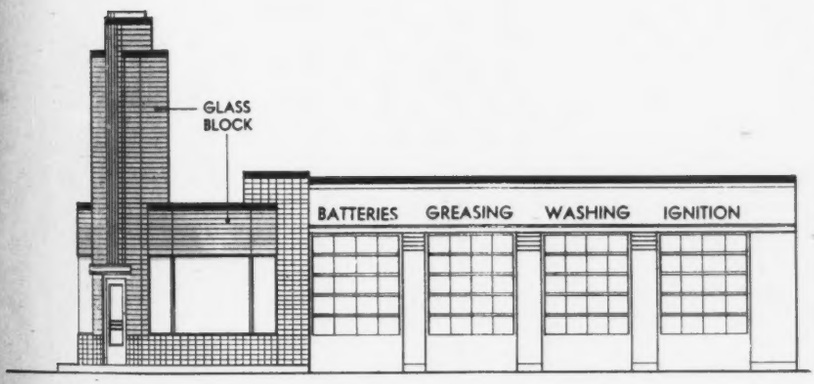
PLAN
SCALE 1/4" = 1'-0"

SECTION A-A
SCALE 1 1/2" = 1'-0"

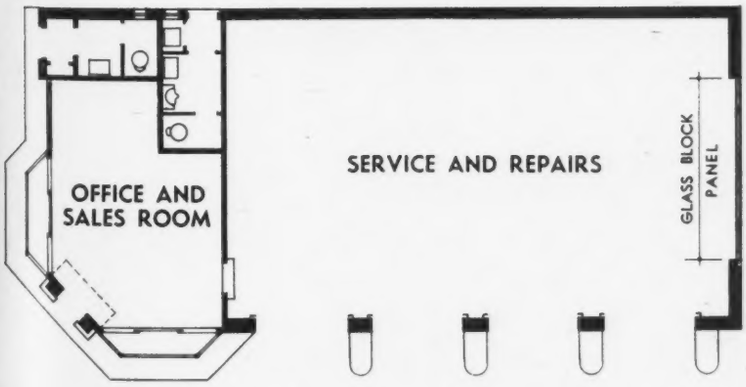
During hours of daylight glass masonry compels attention by the novelty of its water-clear color. At night colored floodlighting produces an effect which cannot be disregarded by passersby. The use of water-clear glass masonry allows great flexibility in the color effects that can be used, necessitating only alterations in the floodlighting equipment. Any commercial building can be made to do more than merely house the activities of production and selling—Insulux Masonry will make it also an attractive advertisement.



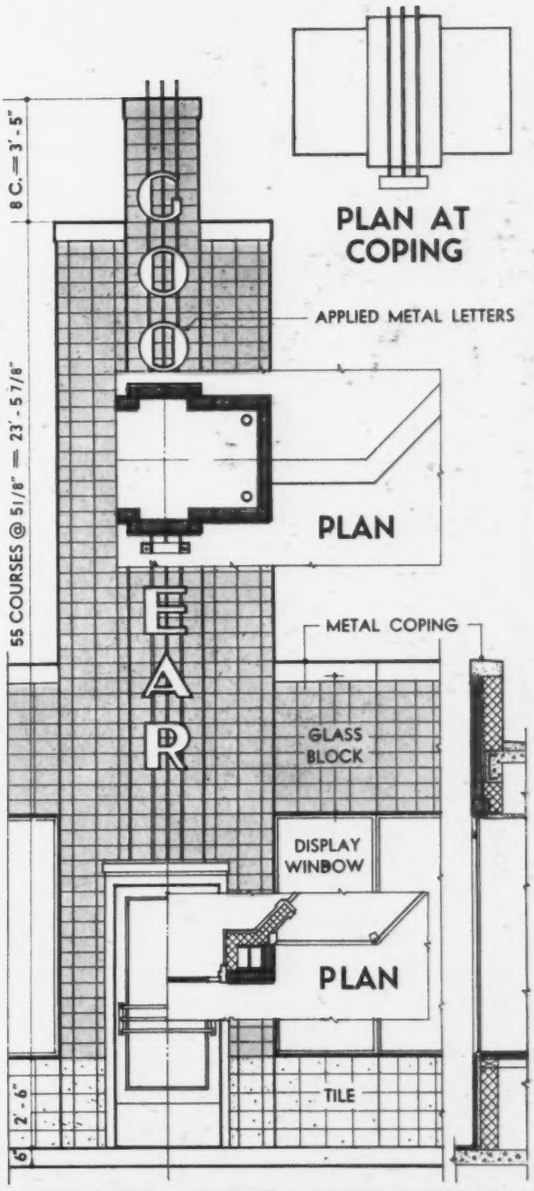
HIGH ATTENTION VALUE OF TRANSLUCENT MASONRY BUILDINGS



ELEVATION OF GASOLINE SERVICE STATION
SCALE 1/16" = 1'-0"

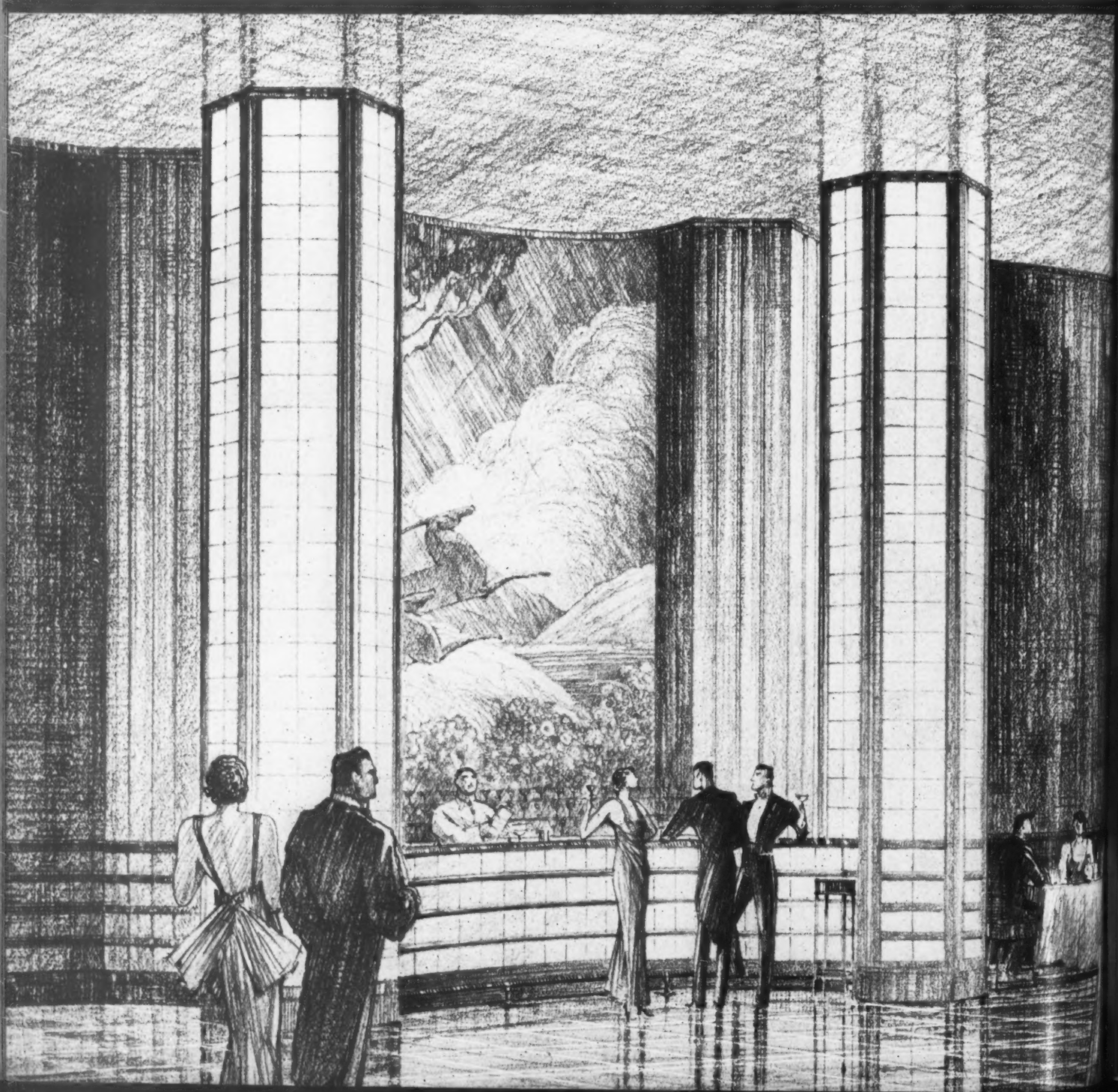


PLAN
SCALE 1/16" = 1'-0"

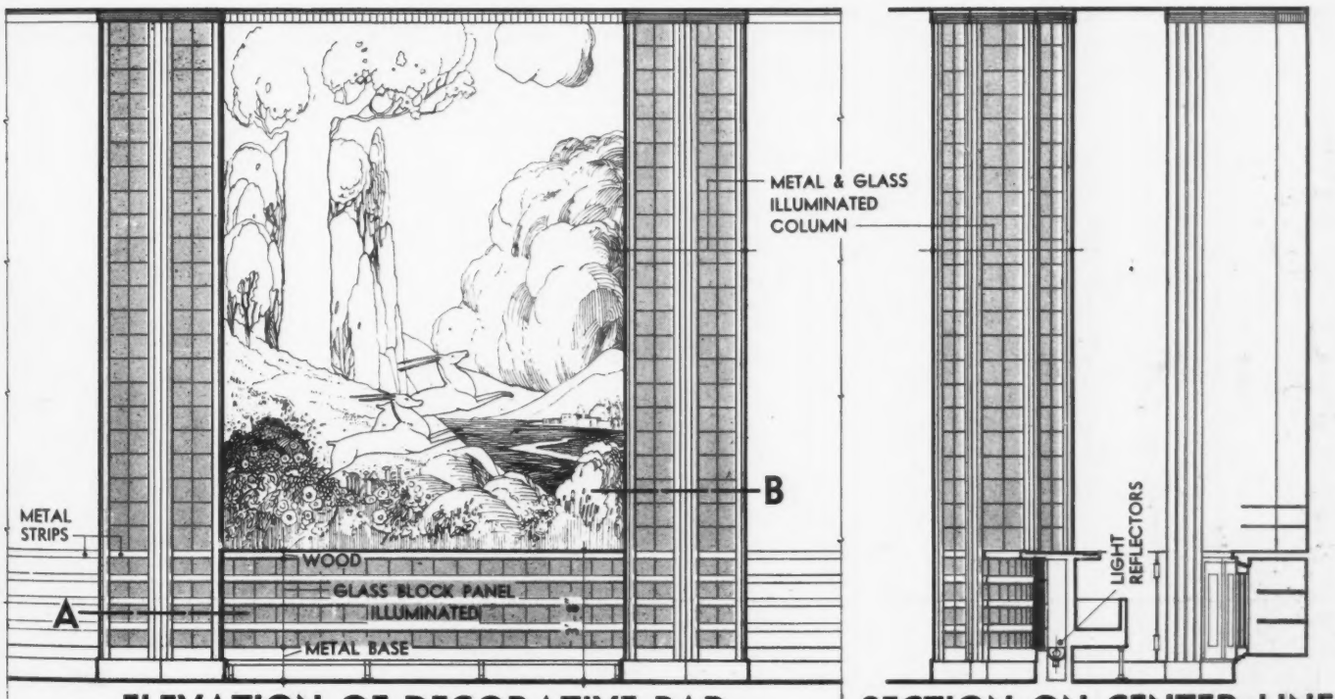


CORNER ENTRANCE DETAIL
SCALE 3/16" = 1'-0"

The imagination of the creative designer is allowed full play with Insulux Translucent Masonry. The sparkling surface and the possibility of striking color effects by means of artificial lighting marks a new step in the development of the modern architectural treatment of interiors. Reference to the plan of the columns suggests one method of lighting. The encasing around the structural column is painted white to reflect the light and create an even tone of illumination. The metal corners containing the strip lighting are removable for the replacement of lamps. The glass face of the bar is lighted by a series of small reflectors, as shown in the section.

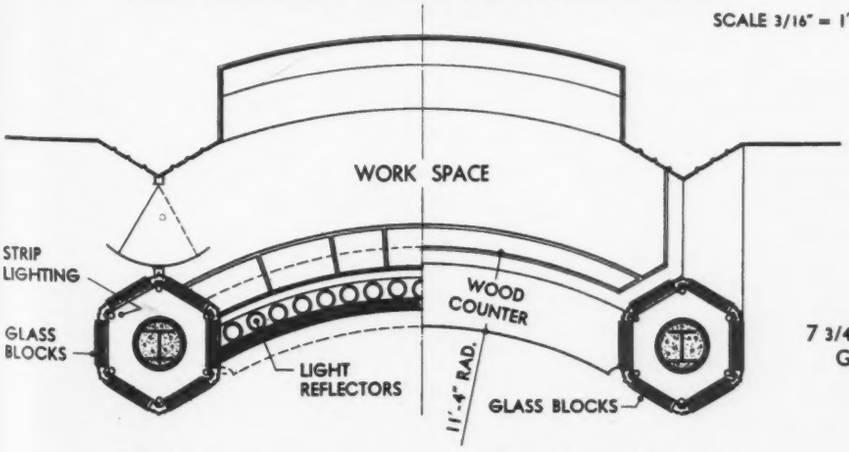


INSULUX FOR MODERN INTERIORS



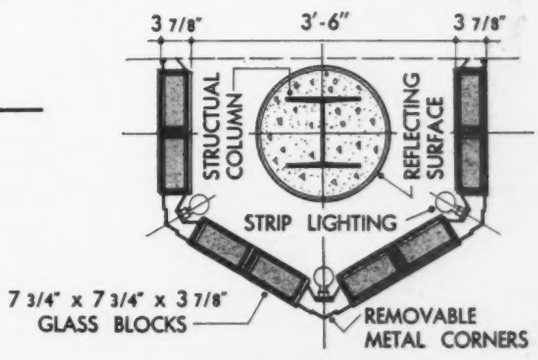
ELEVATION OF DECORATIVE BAR **SECTION ON CENTER LINE**

SCALE 3/16" = 1'-0"



PLAN AT A **PLAN AT B**

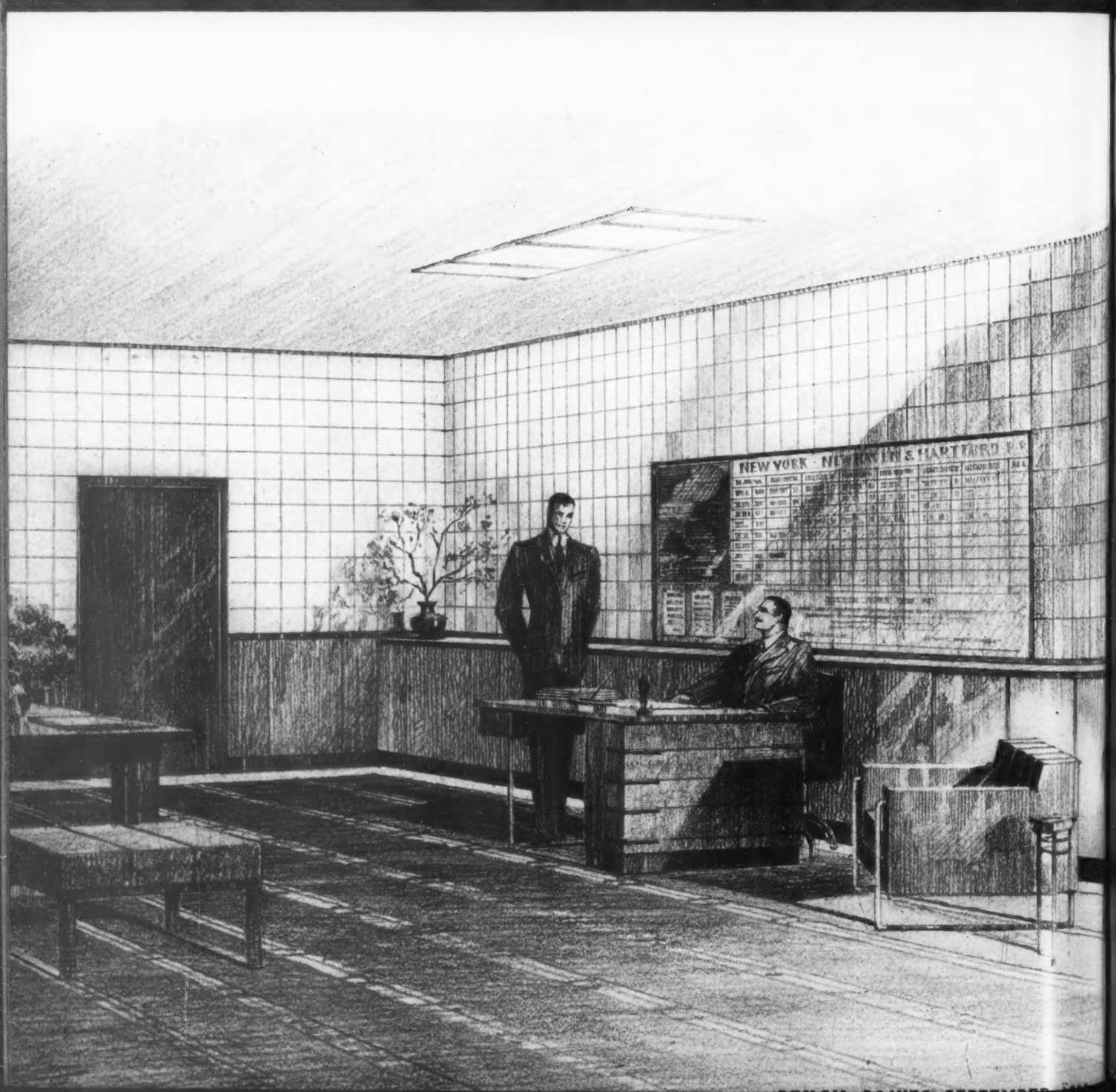
SCALE 3/16" = 1'-0"



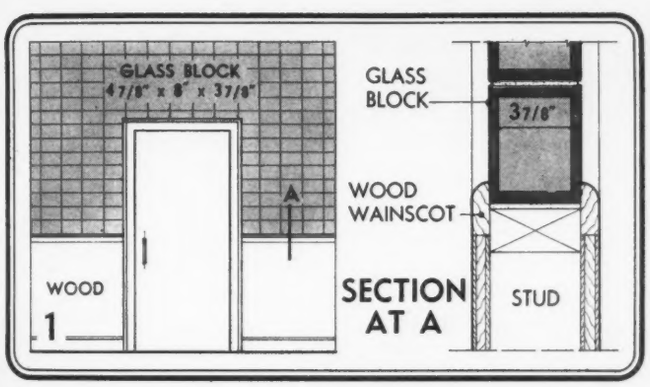
DETAIL OF ILLUMINATED COLUMN

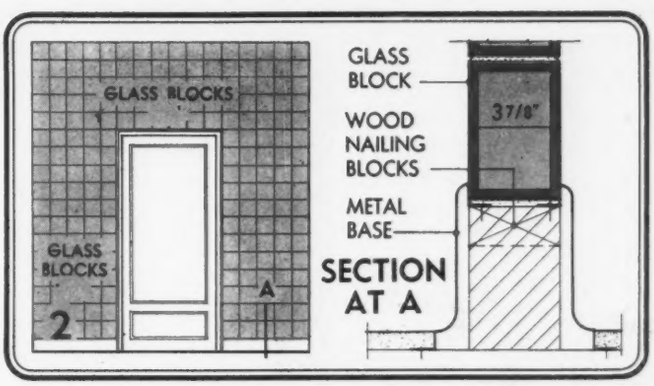
SCALE 1/2" = 1'-0"

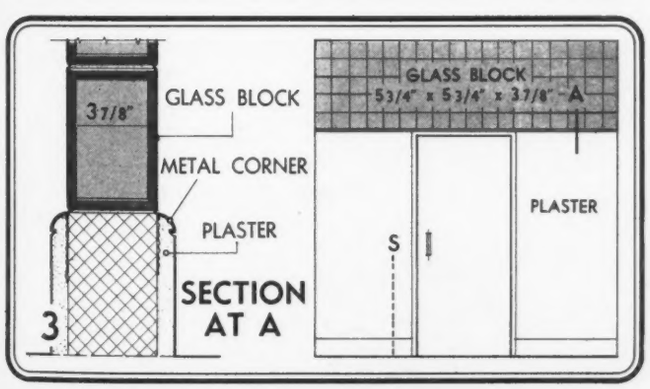
Insulux Glass Masonry offers many advantages over other materials in the construction of interior partitions. Office corridor partitions can be made sound resistant and attractive in appearance, as shown in Figures 1, 2 and 3. The high sanitary property of Insulux and its lack of porosity makes it an ideal material for shower enclosures, hospital and food factory construction, etc. In industrial and loft buildings, it is ideal for dividing spaces without the loss of light, as suggested in Figure 5. The decorative quality of Insulux makes it a suitable material for many other uses, one of which is suggested in Figure 6.

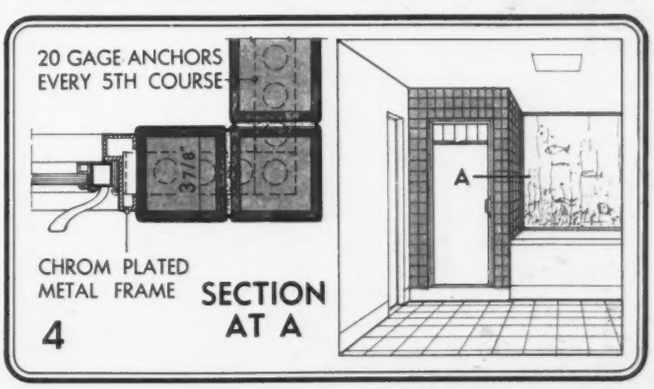


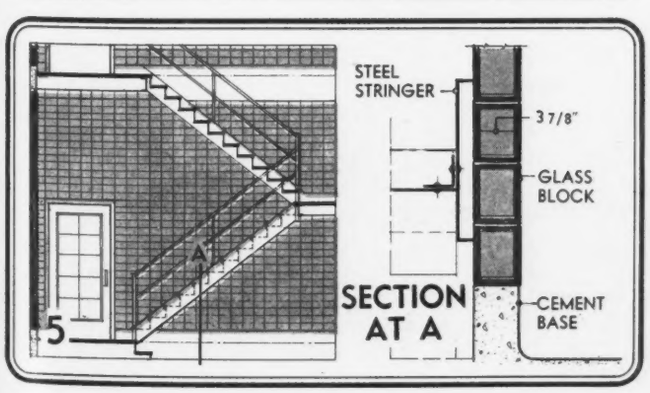
INTERIOR PARTITIONS OF INSULUX MASONRY

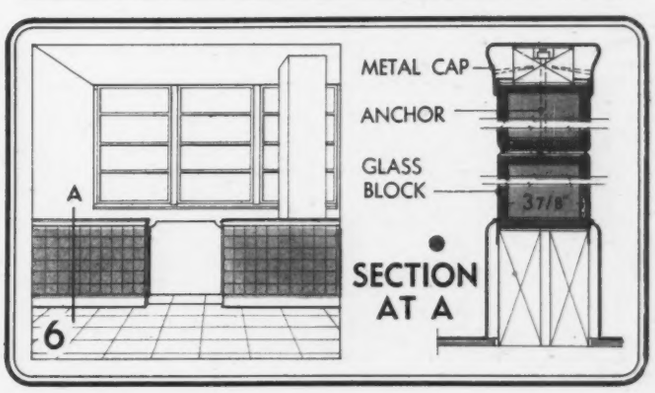




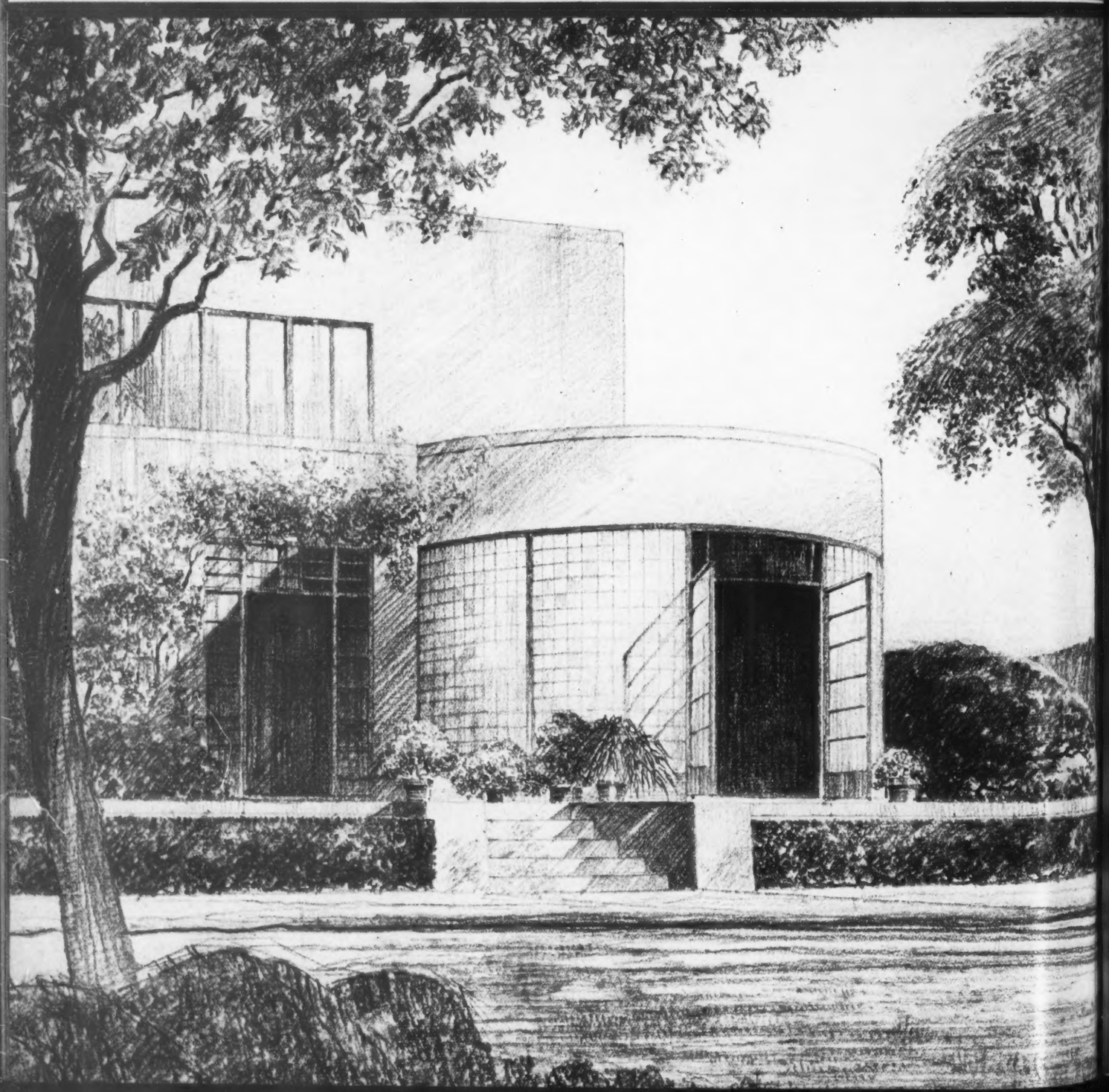




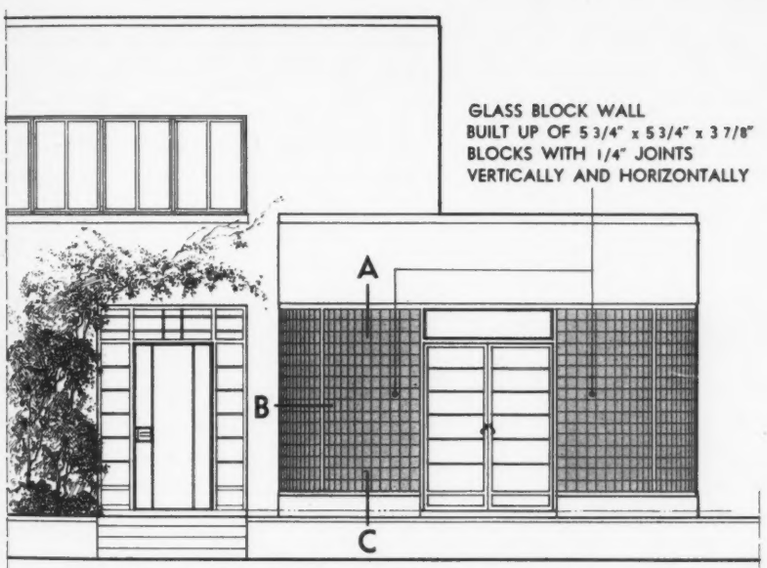




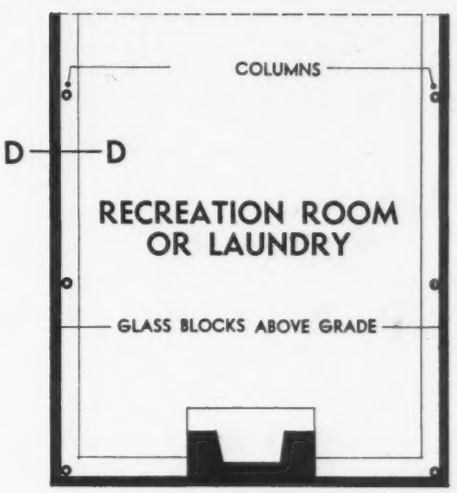
On this page are suggested two uses for Insulux Glass Masonry. Many others will occur to the designer of residences. The ability to admit light of pleasing quality while obscuring the vision of outsiders makes it adaptable to uses such as are indicated here. Openings giving on to unpleasant surroundings may be made to admit light, at the same time obscuring an unsightly view. The problem of securing adequate light in bathrooms without sacrificing privacy is one easily solved with Insulux Translucent Masonry. Basement laundries and recreation rooms can be well lighted by Insulux bulkheads, as shown in the drawing at the lower right.



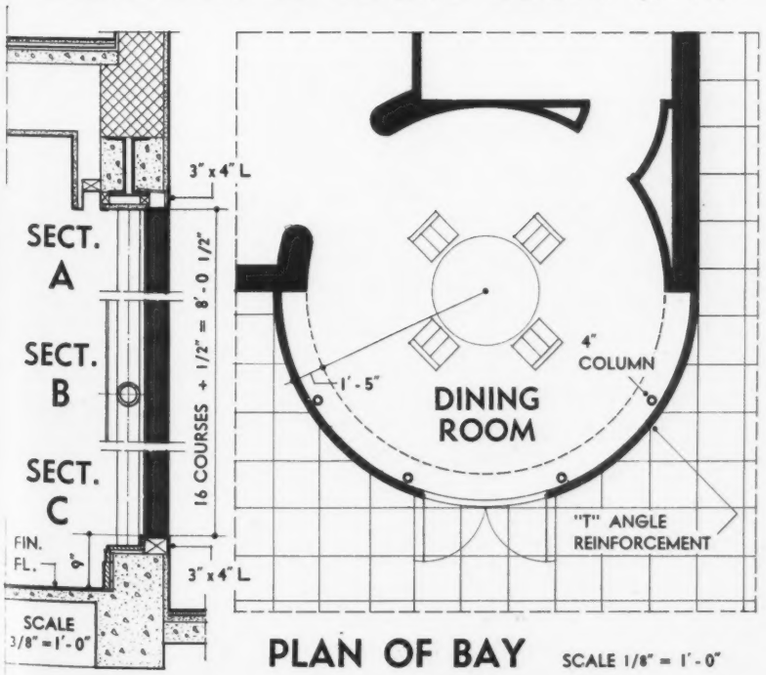
INSULUX MASONRY FOR RESIDENCES



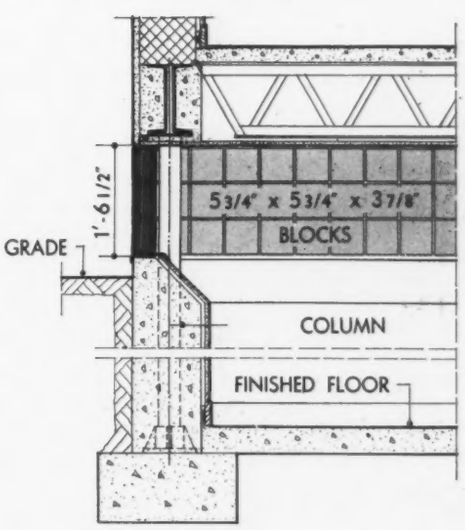
ELEVATION OF DINING ROOM SCALE 1/8" = 1'-0"



PLAN SCALE 1/8" = 1'-0"



PLAN OF BAY SCALE 1/8" = 1'-0"



SECTION D-D
SCALE 3/8" = 1'-0"

BASIC SPECIFICATIONS

Where glass block is called for by the drawings or these specifications, use Owens-Illinois Insulux Glass Blocks or an approved equal.

SIZE AND CUTTING — Use blocks of the size . . . (4-7/8" x 8" x 3-7/8", 5-3/4" x 5-3/4" x 3-7/8", or 7-3/4" x 7-3/4" x 3-7/8". See page 3) . . . face cutting design number . . . (Standard cuttings are 11, 1, 4, 5. Special Standard cuttings are 7, 10, 2, 3. See pages 4 and 5) . . .

CEMENT — None but the following brands of cement may be used for mortar: . . . (The following masonry cements have been tested in glass block work and are recommended* for use: "Kosmortar," manufactured by Kosmos Portland Cement Co., Louisville, Ky.; "Medusa Mix" or "Medusa Stoneset," manufactured by Medusa Portland Cement Co., Cleveland, Ohio; "Richmortar," manufactured by Southwestern Portland Cement Co., Osborn, Ohio.) . . .

SAND — Use natural sand free from deleterious matter and which passes the following sieve analysis: not more than 8% passing 200 mesh sieve, not more than 23% passing 100 mesh sieve, not more than 40% passing 50 mesh sieve, not more than 70% passing 30 mesh sieve, not less than 100% passing 14 mesh sieve.

WATER — Use clean water, free from alkalis or organic matter.

MORTAR† — Use mortar consisting of 1 part cement, 2½ parts sand, proportioned by volume, using only sufficient water to give a smooth, plastic, sticky mortar.

LAYING — Lay glass blocks not more than 5 courses at one time. Allow mortar to attain its initial set** before proceeding with succeeding courses. Fill all joints solidly with mortar. Use . . . (1/4" recommended for exterior work, 3/16" for interior partitions). . . thick joints horizontally and vertically. Lay with bond indicated on drawings. Openings over 4' - 0" in width must have steel lintels. Compress the joints on both surfaces with a metal tool to produce . . . (V-joint, concave, beaded etc.) . . . section. Tool the joints‡ when the mortar reaches its initial set. Do not disturb any block after it has once been laid in place. If necessary to disturb a block, remove it, clean it of mortar and relay.

ANCHORAGE — Use standard corrugated galvanized brick ties. Place brick ties every fifth course to anchor the glass masonry to adjacent masonry for panels less than 6' - 0" in width. Anchor the

***Other prepared cement may be added to this list from time to time upon recommendation of our laboratory after proper tests have been made.**

†The materials used and their mixing have a marked influence upon the ease with which the block is laid. Lack of suction, the brittleness of glass and the fact that the walls are only 3-7/8" thick, requires that high grade mortar be used and that particular attention be paid to the selection of the materials and their preparation.

****The working conditions and size of panel influence the time element. In most cases it is sufficient to allow the mortar to attain the firmness naturally resulting from ordinary speed in laying.**

‡The tooling of mortar joints creates a hardened and smooth skin which resists the penetration of moisture. The mortars selected for use should have water repellent properties, combined with a low thermal expansion coefficient.

glass masonry to free standing columns and to the frames of openings by bending anchors at right angles. Fasten such anchors securely to supports, imbedding opposite end into the glass masonry mortar joint. Use 14 gage galvanized wire anchors, run through punchings every fifth course in steel shapes used as intermediate vertical mullion supports. Bend wire into loops and imbed them in the mortar joint. All glass masonry panels over 12′ - 0″ in width must have intermediate vertical supports. (See details, page 11.)

REINFORCEMENT — Use 20 gage x 1¾″ x 6′ - 0″ strips with 1″ diameter perforations, 1¾″ o/c, galvanized after shearing. Place reinforcing strips in all glass masonry panels over 6′ - 0″ wide, every fifth course. Lap strips 8″, allowing the ends to act as anchors to the masonry piers by projecting into the masonry at least 16″.

CALKING — Where called for by the details, use a plastic, non-hardening, water repellent calking compound of approved brand.

CLEANING — Clean the masonry surface promptly upon completion by removing all mortar or other foreign matter with steel wool and ammonia solution.

The simple mortar joint, made possible by the Owens-Illinois method of securing bond, makes the cost of erection and repair of Insulux Glass Masonry lower than if the bond depended upon an irregularly shaped mechanical key. Ordinary care in handling Insulux Glass Blocks on the job will result in a complete absence of breakage. No greater precautions are necessary than in the handling of fine face brick or cut stone.

SCIENTIFIC TEST DATA

Technical data are available as the result of extensive laboratory tests on many of the aspects of translucent masonry construction. Additional information on scientific questions will be furnished gladly upon request.

COST OF INSULUX MASONRY

It is only by the Owens-Illinois method of manufacturing glass blocks that a product of great uniformity can be produced at such a low cost. Insulux Glass Masonry compares in first cost with medium quality 8″ thick brick walls or average quality glazed steel sash—but offers high heat resistance and other advantages materially reducing the expense of maintenance. The simple reinforcing method recommended combines complete effectiveness and economical installation. Prompt quotations will be furnished by an Owens-Illinois representative upon request. The cost of any material in place is the only basis for accurate comparison.

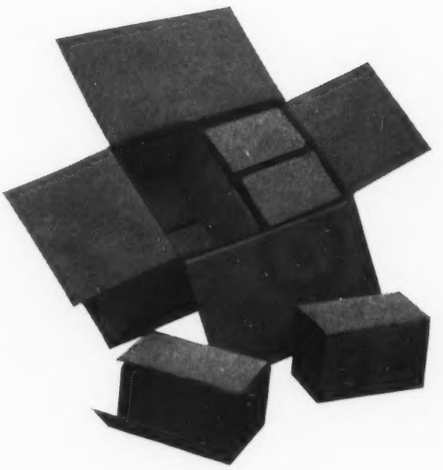
ESTIMATING DATA

For 100 sq. ft. of wall	4⅞ x 8 x 3⅞	5¾ x 5¾ x 3⅞	7¾ x 7¾ x 3⅞
Thickness of Mortar Joint	1/4	1/4	1/4
Number of Blocks	341	400	225
Volume of Mortar Joints	2.47 cu. ft.	2.61 cu. ft.	1.96 cu. ft.
Crew Hours*	6 3/4	8	5 1/2
Thickness of Mortar Joint	3/16	3/16	3/16
Number of Blocks	348	409	229
Volume of Mortar Joints	1.88 cu. ft.	1.98 cu. ft.	1.48 cu. ft.
Crew Hours*	7 1/4	8 1/2	6

*Crew consists of 1 Layer, 2 Helpers

PACKING AND DELIVERIES

Large stocks of Insulux Glass Blocks in "Standard" sizes and cuttings are carried for immediate and prompt delivery. The equipment for producing types illustrated as "Special Standard" is always ready for operation and orders will be produced and shipped promptly. If orders are placed at the time of letting a building contract, ample time will be thus allowed for the manufacture and delivery of "Special Standard" types. Colored blocks, blocks with other than standard cuttings and blocks of odd size, require specially made equipment and the time necessary to produce such "Special" blocks will vary and should be ascertained from the company. The production facilities of the Owens-Illinois Glass Company for the manufacture of glass blocks are unequalled and the reputation it enjoys has been built upon its willingness to give service. It is noteworthy that the generous employee policy of the Owens-Illinois Glass Company has kept it free from labor troubles.



Insulux Glass Blocks are packed in convenient corrugated cartons and weigh, packed, approximately as follows:

4-7/8" x 8" (Series No. 1) .... 4 1/2 lbs.
5-3/4" x 5-3/4" (Series No. 200) .... 4 lbs.
7-3/4" x 7-3/4" (Series No. 300) .... 7 lbs.

If your contractor is not able to obtain Insulux Glass Blocks from his local jobber or building supply dealer, the Owens-Illinois Glass Company at Muncie, Indiana, will supply the names of dealers in your vicinity who maintain adequate stocks.

OWENS-ILLINOIS GLASS COMPANY
INSULUX DIVISION
MUNCIE, INDIANA

The American Institute of Architects
The Octagon, 1741 New York Avenue
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The Standard Contract Documents

These contract forms have stood the test of time. They have reduced to a minimum lawsuits and misunderstandings.

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They eliminate worry. They reduce office overhead. They safeguard the position of the Architect. They expedite the business of building.

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Form of Subcontract	.10
Letter of Acceptance of Subcontractor's Proposal	.10
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Miscellaneous Documents

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Alphabetical Index to Standard Filing System	.50
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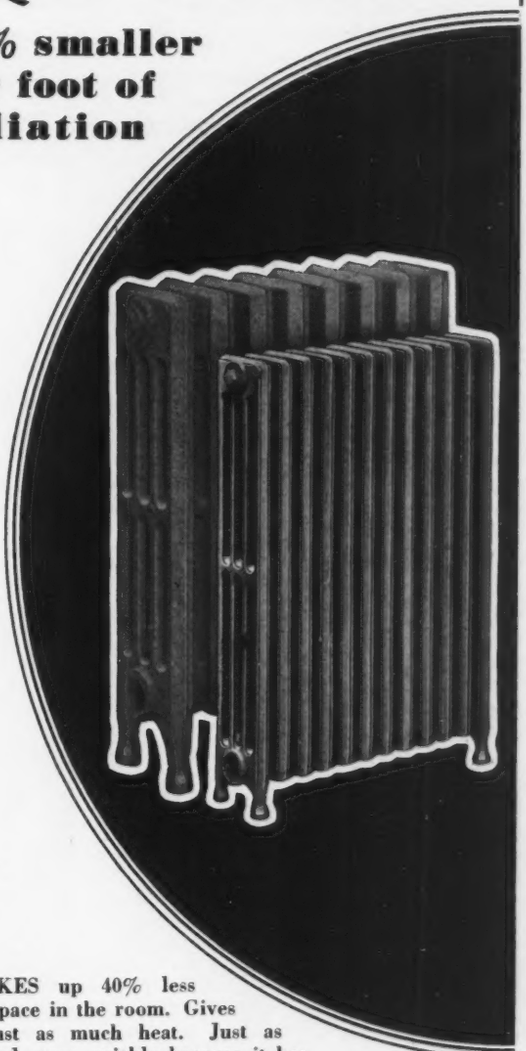
a new cast iron *Radiator* that is

40% smaller per foot of radiation



TAKES up 40% less space in the room. Gives just as much heat. Just as much and more quickly because it has practically 100% actual radiating surface, around which the air has the freest possible circulation.

So narrow are these Burnham Slenderized Radiators, in fact the 3-tube is 3¼" wide, 4-tube 4⁷⁄₁₆", 5-tube 5¹¹⁄₁₆", that they can be recessed between the studding under windows, and not extend into the room. When so placed, no grilles are needed. The radiator is so good-looking, it acts as its own grille. The design is cleancut and entirely free from ornamentation, except for a fine beading. Radiators set up off the floor an extra inch, making cleaning under them easier.

Bear in mind that in spite of their many advantages, they cost you no more than other cast iron radiators. Glad to send you measurements, ratings and full particulars.

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Boston Architectural Club

The heart of the Boston Architectural Club at 16 Somerset Street, Boston, Mass., is in its Library. This room gives definite expression to the purposes for which the Club was founded, in the use of the books by men studying architectural design.

On the shelves are many historical architectural works. Grouped with these are modern books on design, construction, materials, and methods.

The study of architectural design, based on the Atelier system, presents a young man a sound basic training preparatory to work on large plan problems.

Problems in advanced design proceed simultaneously and in conjunction with similar work in the Architectural Schools of Harvard University and Massachusetts Institute of Technology.

Men qualifying in advanced design are then eligible to compete for scholarships in Architectural Schools, The Rotch Traveling Scholarship, The American Academy of Rome Prize, The Paris Prize, and others.

The Club, since its founding in 1889, has always had the earnest support and cooperation of the Boston Chapter of the American Institute of Architects, many of whose members are also active in the Club enrollment.

New Book on Housing

Harper and Brothers announce an excellent new book on housing by Frank Watson, entitled *Housing Problems and Possibilities in the United States*, and selling for $1.25 a copy. The current interest in improved housing as part of the recovery program lends special importance to this book—a comprehensive study of the subject by one in active association with the federal housing administration.

Why isn't the housing problem solved? What are the needs of American housing? How can the home mortgage problem be solved? How can real estate taxes be reduced? These are some of the urgent questions here discussed.

That housing reform may be the primary factor in recovery is the belief of the author. "Prosperity," he writes, "has traditionally returned to this country through the medium of the opening up of new fields of activity. A new field is needed today to overcome the slowing down of our economic machine . . . . The opportunity lies in housing. The relationship between housing standards and standards of living is obvious. To bring about a general increase in the quality of our housing will, in consequence, result in an increase in those general living standards."

In this volume special attention is given the home mortgage situation; the respective merits and shortcomings of the banks, the insurance companies, the building and loan associations, in this field. The new government housing program is clearly explained and appraised.

The text is supplemented throughout with statistical tables and graphs of interest not only to those directly concerned with the housing problem but to the general reader as well. A few of the basic figures are:

46.8 per cent of American families own their own homes.

The median monthly rental of non-farm homes is $27.15.

The median value of non-farm homes is $4,778.

At present rate of turnover, existing dwellings will be used 142 years.

The author, a graduate of the Harvard Law School, has since February, 1933, been an attorney in a number of important posts in Washington. In the Reconstruction Finance Corporation he has done special work on the President's Housing Program, and has been Acting General Counsel for the Federal Housing Administration. He drafted the National Housing Act. This book is the result of intensive studies of the housing problem made during his administrative duties.

New Edition of Air Conditioning for Comfort

(277 + vii pages and large psychrometric chart; clothbound; 5½ x 8½ in.; price $2.50 postpaid; published by Keeney Publishing Company, 6 North Michigan Avenue, Chicago, Illinois.)

"Lewis' New Air Conditioning for Comfort," by Samuel R. Lewis, is a completely rewritten and enlarged edition of the "Air Conditioning for Comfort" published in 1932. It embodies the experience resulting from use of the earlier edition in almost daily practice and by students in many schools. It will be found valuable as a text for school and home study use as well as a reference for the contractor, engineer, architect, or owner. The author is actively engaged as a consulting engineer in air conditioning work, a past president of the American Society of Heating and Ventilating Engineers, and is recognized as a foremost authority on the subject.

In this improved, second edition, the record sheets for the computation of the heating and cooling loads for residences and commercial buildings are new and have been simplified. Two chapters not included in the first edition explain in detail the design of a year-round air conditioning system for an office building, which includes banking space, offices, stores, restaurant, cocktail lounge, and kitchen. The necessary computations are given in their entirety in the explanation of the design procedure. Similarly, two rewritten chapters cover the design of a year-round residence air conditioning system, with complete computations, record sheets to simplify the various steps, and the necessary tables and charts.

Black and white architectural composition in pen and ink by Charles Perry Weimer